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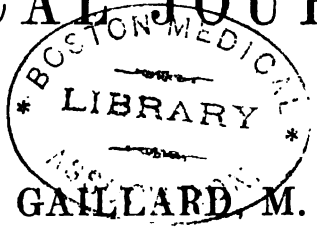


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EDITOR AND PROPRIETOR.

INDOCTI DISCANT ET AMENT MEMINISSE PERITI.

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VOLUMES XI AND XII.

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THE LARGEST MEDICAL MONTHLY IN AMERICA.

LOUISVILLE, KY.

HULL & BROTHER PRINTERS,

1871.

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THE RICHMOND AND LOUISVILLE

# MEDICAL JOURNAL.

VOL. XII. JULY, 1871. No. 1.

## ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—NOTES ON CHLORAL HYDRATE. By A. M. FAUNTLEROY, M. D., Staunton, Va.

This remedy appears, from clinical observation, to occupy the middle ground between an anæsthetic and narcotic agent; administered in doses which are not immoderate, its effects would not justify its assignment to either of the aforesaid classes. Hydrate chloral is *pre-eminently a hypnotic.* Its energy is mainly and primarily expended upon the brain structure in the production of sleep; from its great solubility and its power of extreme diffusibility, this result is attained with a readiness and celerity which surpasses in efficiency that of any other remedy known in the materia medica. For the correction of insomnia, occurring under the most varied circumstances, it appears to possess the most singular power and adaptability. In addition to the above, it presents yet higher claims to our favorable consideration and acceptance; all remedial agents present, more or less, their credit and debit aspect. The good and desirable effects produced may be assigned to the former, while the evils incidentally incurred by the patient should be recorded on the debit side of the account.

Restorative sleep, rest, quietude, or anodyne effect may be secured, by the employment of hydrated chloral, without the disagreeable offset of headache, nausea, impaired digestion and appetite, and constipation, which analogous remedies occasion in one regard or several. In the integration of therapeutical results, where may the physician look for a more satisfactory and pleasing exhibition of *maxima* and *minima*? Hydrated chloral, it has been said, resembles chloroform in its action, yet observation has convinced us that its effects are not identical with those of chloroform, which suspends alike sensation and motion. In affirmation of this statement, we may refer to the notes of two cases, in which the typical effects of chloral hydrate were secured:

We essayed to operate, in both instances, for the removal of hæmorrhoids by ligature, using the hydrate chloral. In these cases profound sleep was induced by the exhibition in one instance of sixty, and in the other of ninety grains. The very moment the tumors were pierced by the needle, the patients awoke to an acute apprehension of the circumstance and their surroundings, and it became necessary to resort to the inhalation of chloroform on both occasions, in order to render the operation painless. But little chloroform was required in either instance, in order to establish a satisfactory state of anæsthesia.

To one of the patients referred to, we had on a former occasion administered chloroform by inhalation, and it was fully three-quarters of an hour before chloroformization was established; but when we resorted to the chloroform, after the failure of the hydrated chloral to produce anæsthesia, the patient yielded quickly and quietly to the chloroform. From these cases we would infer, that the chloral hydrate cannot be substituted for chloroform in surgical procedures; that chloroform and hydrated chloral may be used conjointly with safety and utility; and that by the administration of hydrated chloral extremely nervous and excitable subjects may be prepared for a calm and speedy surrender to the influence of chloroform.

The following case is interesting in several points of view:

B. M. J., aged 24 years; acute puerperal insanity, with suicidal proclivity; before coming to Staunton, in one of her paroxysms of mania, she had seized the vial containing the following prescription, and hastily swallowed its contents, to-wit:

℞.—Chlorali Hyd., ʒ v.;
Tinc. Hyoscyami, ʒ vi.;
Fluid Ext. Valerianæ, ʒ x.

The result of this rash action was a profound sleep of ten hours' duration.

At a subsequent period we have ascertained that the bromide of potassium was exhibited in 100-grain doses, three times daily, during four days; aggregating 1200 grains; there was not the slightest manifestation of stupefaction during this administration.

August 6th.—Had forty grains of chloral hydrate at 8 P. M.; no sleep.

August 7th.—Fifty grains were ordered at bedtime; no sleep.

August 8th.—Half a grain of morphia sulphas was added to fifty grains of hydrated chloral; produced sound sleep.

During the progress of the case, the nightly dose of chloral hydrate was increased to a drachm, with one grain of morphia sulphas; patient recovered.

The history of this case is not given in detail, as our only object is to exhibit the failure of large doses of hydrated chloral alone to produce sleep, and the advantages secured by a combination with morphia sulphas. The 300 grains of hydrated chloral taken by the patient in her excitement, though it occasioned not even temporary disadvantage, secured, however, the sleep so much needed. No physician would order for a single dose as much as 300 grains of hydrated chloral; still the case shows that, under certain circumstances, exceedingly large doses may be employed with safety and advantage alike.

Dr. Eshelman, of Philadelphia, has recorded, in the second number of the "Philadelphia Medical Times," an instance in which 460 grains of hydrated chloral were taken at once;

the largest quantity ever ingested at once by a human being. Recovery from the effects produced was attained by the immediate and active employment of means to counteract coma. Should an instance of the toxical effects of the chloral hydrate come within our observation, we should be disposed to employ small doses, hypodermically, of strychnia sulphas.

To Dr. Oscar Liebreich, of Berlin, the profession is indebted alike for a knowledge of the remedial virtues of chloral hydrate and the affirmed antidotal powers of strychnia.

The experiments of M. Rajerosky, upon rabbits, appear to have demonstrated that the hydrated chloral may correct the toxical effects of strychnia.* Hydrated chloral is a most remarkable agent in this regard; we have repeatedly administered it in cases of so-called neuralgic headache, in which the subjects have declared their consciousness of pain up to the last waking moment. Some have expressed themselves as going to sleep in despite of the headache.

We have, however, more than once witnessed its anodyne effects, when exhibited in doses which were neither sufficient nor designed to induce sleep. As for example, during the *after-pains* of labor, and in dysmenorrhœa. These results are in accordance with those attained by Dr. Weeden Cooke in that distressingly painful affection, cancer of the womb; ten-grain doses, *ter die*, produced effects which he has described† as "charming and persistent, freedom from pain, unimpaired appetite, no headache, sleeping well at night, and no morning sickness."

The following case illustrates the advantages of the combination with morphia sulph., and the failure of the latter agent alone to meet the indication; and exhibits also the fact that the *impressions* made by the hydrated chloral are not as evanescent as they are generally thought to be:

G. H. A., aged 52; disease mental, with delusion and suicidal tendency; health much impaired. Treatment: Iron, cod-

* The Journal of Psychological Medicine, July, 1870.

† The London Lancet, April 20, 1870.

liver oil, and whiskey; morphia sulphas at night to produce sleep, beginning with *half* a grain, and gradually increasing to *one* and a *half*; sleep deficient.

February 25th.—Sleep still deficient; substituted *twenty* grains of chloral hydrate for the morphia.

February 27th.—Hydrated chloral increased to *thirty* grains.

February 28th.—Sleep being still deficient, half a grain of morphia sulphas was given with the hydrated chloral; produced sound sleep.

March 1st.—Exhibited *one* and a *half* grains of morphia sulphas *alone*; result, slept none.

March 2d.—Thirty grains of the bromide of potassium with morphia sulphas, grain i., ss.; produced sleep. Nightly dose the same up to March 16th, when the morphia sulphas was disassociated. The bromide of potassium *alone* made the patient sleep; and on April 6th it was withheld, the patient sleeping well.

June 1st.—Again became sleepless, and *thirty* grains of hydrated chloral ordered to be taken nightly, produced sleep.

August 10th—Condition improved mentally and physically; chloral hydrate discontinued.

August 25th.—Growing worse mentally; the chloral hydrate was again resumed in half-drachm doses at night. Result, sleep and mental improvement.

October 4th.—The satisfactory sleep and improvement secured seemed to justify the withdrawal of the chloral hydrate; still the patient slept.

November 8th.—The *impression* made seemed to be fading away, as in the previous intervals of the suspension of the chloral, and the remedy was resumed (*thirty* grains) without improvement or benefit.

We have administered the chloral hydrate during parturition, and procured an abatement of suffering without occasioning the slightest interference with the uterine contractions. Short naps and freedom from suffering have followed the occasional administration of ten-grain doses during the first stage of labor;

but as the advancing head encroached upon the perineum the sensation of pain revived. During the first stage of labor, in the *after-pains*, and in dysmenorrhœa, the organic nervous system is principally, if not mainly, involved. The satisfactory results obtained by the employment of chloral under the aforesaid circumstances would, seemingly, show that the hydrated chloral possessed an elective affinity for the organic nervous system. The failure of hydrated chloral to relieve the pain of facial and frontal neuralgia, notwithstanding sleep was induced, is strikingly illustrative alike of the said affinity, and of impotency of the chloral hydrate over pain existing or originating in the cerebro-spinal nerves. Should any one doubt the latter assertion, he may try it for himself; yet we would anticipate the result, as like that of the skeptical Hotspur, when he taunted the mystic Welchman to produce the spirits, which he boasted he could call from the vasty deep.

Reasoning from cause to effect, may we not conclude that the virtue of hydrated chloral as a hypnotic, may be due to its influence upon the vaso-motor nerves of the brain. Such an influence would be in harmony with the accepted theory of sleep.

From our observations, made thus far, we believe that hydrated chloral cannot be substituted for chloroform during the second stage of labor, in which the spinal nervous system becomes mainly implicated. We would be disposed to restrict the use of hydrated chloral when desirable to the initiatory stage of labor.

Anstie * has asserted, after extended observation, that there are "certain portions of the skin and subcutaneous tissue which retain their sensibility with extraordinary tenacity. These are the matrix of the great toenail, the margin of the anus, and the whole skin of the organs of generation. It is impossible to obliterate their sensibility without pushing chloroformization to a degree which greatly surpasses that required for ordinary purposes."

* On Stimulants; page 305.

The anæsthesia which chloroform thus so tardily induces cannot be expected of moderate or safe doses of the chloral hydrate.

The following case exhibits the failure of the hydrated chloral to subdue the paroxysms of maniacal excitement; and also some manifestations *counterfeiting alcoholism:*

M. P. M., vigorous for her age, being over seventy; long subject to attacks of mania, about once annually. Last attack began in January, with absence of sleep, followed by headache for several days, which culminated rapidly in mental excitement.

January 22d.—Ordered twenty grains of chloral hydrate at night; slept well; same dose repeated nightly.

January 26th.—Sleeping at night, but growing daily more excited. Ordered ten grains of chloral hydrate morning and noon, and twenty grains at bedtime.

January 27th.—Calmer, but cannot talk plainly; continued to sleep at night, but becoming more maniacal, till on the afternoon of February 1st, became wild with excitement. Exhibited twenty grains of chloral hydrate at 4 o'clock and 8 P. M. Slept, but the next day (February 2d) was worse; twenty grains three times during day; slept at night.

February 3d.—More excited, tearing the clothes, etc.; ordered twenty grains four times during the day.

February 4th.—Twenty grains in the morning and at noon; looked and acted like a person intoxicated; staggering, pronunciation imperfect, whooping, and tearing the clothes. Hydrated chloral was discontinued; she fell into a sound sleep.

February 7th.—Quiet ever since the 4th inst.; has had no medicine.

The following partial history is submitted as somewhat interesting:

M. A. M., aged sixty, old maid; general health not good; melancholia. January 10th, administering fifty grains of hydrated chloral and half a grain morphia sulphas nightly; not sleeping well; had been taking chloral hydrate since December

11th. To ascertain whether *a deficiency of an alkali in the blood had anything to do with the partial failure of the chloral hydrate to produce sleep*, gave ten grains of the bicarbonate of potassa morning, noon, and evening, and exhibited the hydrated chloral at 8 o'clock P. M. Slept no better than usual. January 26th, administered at bedtime thirty grains of bichloride of potassium and thirty grains of hydrated chloral; slept worse than usual. Under the continued employment of the hydrated chloral the patient's condition has improved somewhat; still under treatment.

The following cases are not without interest:

F. D. J., aged thirty; exhaustion from work, poverty and child-bearing; maniacal. In this case hydrated chloral and morphia sulphas separately and combined had no satisfactory effect. Iron, whiskey, abundant food, and fresh air during several months were followed by improvement.

L. J. J., young woman; primary dementia with excitement; strong hereditary predisposition. In the autumn of 1870 having become cachectic, manifested suicidal impulse, rejected all food, and slept none. Administered morphia sulphas for three nights in half, three-fourths, and one-grain doses; scarcely slept any, and looked worse. Hydrated chloral produced sound sleep at night; and together with tonics and stimulants, her physical health returned, and she lost her suicidal impulse.

L. G., aged thirty-three, married, mother of eight children; has the appearance of being in good health. Suicidal melancholia; repeated attacks; sensation of burning heat in left side over region of the ovary always accompanied her mental disorder, and increases or diminishes with it. Morphia sulph. made her sick, and did not uniformly produce sleep. Hydrated chloral in doses of thirty to fifty grains secured sound sleep every night. Iron also was prescribed. Greatly improved.

M. A. P., aged thirty-seven; no catamenia for three years; cachectic; religious melancholy. Iron and whiskey administered daily.

August 19th.—Became noisy, with lamentations. Exhibited

at night half a grain morphia sulphas, and repeated the dose next morning; vomited both. At 5 o'clock P. M. administered fifteen grains of hydrated chloral. Soon afterwards became hysterical; slept but little at night. Next day (21st) fifteen grains of chloral hydrate morning and night; another hysterical paroxysm after the night dose; chloral hydrate discontinued.

September 8th.—Other remedies had been tried without benefit; agitation and distress very great; had five grains of hydrated chloral noon and evening without remarkable effect. Next day (9th) had seven and a half gains of chloral hydrate morning and at noon. An hour after noon dose she was found lying on the floor apparently unconscious, with eyes open and pupils somewhat dilated; muscles relaxed; on closing lids they reopened; on taking hold of the arm it seemed lifeless, and could be thrown about in any direction until it was directed towards the face, as if to strike it, when resistance was immediately felt. A short time afterwards she turned on her side, and slept for four hours.

September 10th.—Administered seven and a half grains of chloral hydrate three times during the day. Two hours after exhibition of third dose another hysterical paroxysm occurred; medicine was continued.

September 13th.—She was composed and much better.

September 20th.—Discontinued the chloral hydrate, being composed and entirely rational. Soon recovered.

R. J. L., young woman in fair health; mania; sleepless; noisy; incoherent and destructive.

November 5th.—Morphia sulphas, one-third of a grain hypodermically.

November 6th.—Noisy all last night; tongue dry; emesis. No food taken.

November 8th.—Recovered from effects of morphia. Ten grains hydrated chloral with iron and whiskey three times daily. Night dose of chloral was soon increased to twenty grains; did very well till November 11th; had been sleepless

two nights. Morphia sulphas, half a grain added to evening dose of the chloral hydrate.

November 19th.—No sleep last night; excitement greater; thirty grains of hydrated chloral and half a grain of sulphate of morphia night and morning.

November 20th.—Vomiting; excitement unabated; morphia discontinued; continued to take chloral hydrate; sleeping, but not improving till the quantity reached 120 grains per diem, which she took from December 3d to 8th; looking well and experiencing no bad effects. All medicines were discontinued.

December 29th.—Placed a blister upon the back of the neck, and sprinkled blistered surface with powdered opium at first; afterwards with morphia sulphas. Continued this till January 15th, 1871. Mentally improved; morphia upon blistered surface did not produce the disturbance which had previously followed its use by the mouth and hypodermically. Agreed to take the medicine which, up to this date, had been taken through a nose-tube. Chloral was resumed, twenty grains three times daily was not found to be sufficient; thirty grains three times daily seemed to produce too much drowsiness; twenty-five grains three times daily answered admirably. She is now (February 8, '71) convalescent.

H. J., age not known, but menopausis occurred some time ago; subject to paroxysms of mania every year or two since puberty.

November 23, '71.—Excitement setting in, and patient sleepless; gave twenty grains hydrated chloral.

November 26th.—Dose had been increased to thirty grains morning and night.

November 30th.—Quiet and sleeping well; chloral hydrate discontinued.

December 7th.—Excitement returning for two days; resumed chloral hydrate.

December 14th.—Doing quite well; suspended the hydrated chloral.

December 24th.—Excitement returning with erotic manifestations; chloral hydrate was given at night.

December 30th.—The erotic symptoms most prominent; gave forty grains brom. potass. morning and noon; chloral hydrate at night.

January 10, '71.—Changed prescription to thirty grains brom. potass., and also ten grains chloral three times a day.

January 13th.—Doing so well that the medicines were suspended.

January 18th.—Becoming erotic and excited again; combination of chloral and bromide resumed.

January 20th.—Sleepless, noisy, and destructive. The chloral hydrate increased to twenty grains three times daily. Bromide the same as before.

January 24th.—Sleeping all night and drowsy all day, but refractory.

January 26th.—Drowsiness increased; remained in bed. Bromide diminished to grains twenty; ten grains chloral.

January 28th.—Stupid, staggering; pulse very soft; medicines discontinued.

January 29th.—Pulse exceedingly soft and feeble. The pulsation of the carotid artery was gentle and prolonged, communicating a peculiar sensation to the finger. In the wrist the pulse could not be examined. After an ounce of whiskey and one-fourth of a grain of the extract of belladonna, the pulse promptly increased its force.

These may be taken as the effects of the combined drugs, as the patient had no more chloral hydrate daily in the period (January 20th to 26th) than in that from the 8th to the 14th of December.

A. S. B., aged sixty-four; general health bad. Intense mental distress associated with (and by the patient ascribed to) an indescribable "misery" in the epigastric region. The fons et origo of the malady is probably in the solar plexus. Morphia sulphas used as an anodyne and hypnotic, became gradually increased to two grains in the morning, and three grains in the evening. Appetite was bad, and bowels were constipated.

January 11th.—Discontinued morphia. Prescribed thirty grains of bromide potass. and twenty grains chloral hydrate three times a day. After morning dose became quiet (usually disturbed the house by groaning). After noon dose slept an hour or two. After evening dose, at 6 o'clock, slept so profoundly that she could not be aroused sufficiently to take food. Pulse 56, and had a peculiar quiet beat. Respiration normal, with a slight natural snore. Shook her, and she drank a cup of coffee, and dropped off to sleep in a moment. At 9 o'clock had been aroused and had taken some supper and was fast asleep again.

Next day, January 12th, waked early and began the usual groaning. At noon ordered bromide twenty grains; ten grains of chloral. In the evening, bromide thirty grains; twenty grains chloral. Slept six hours.

January 13th.—Feeling "very badly;" bromide twenty grains; chloral ten grains, morning and noon. Evening, gave bromide thirty grains; chloral twenty grains. Continued thus till January 19th; sleeping at night and drowsy all day. Tongue paretic; great muscular relaxation. Diminished night dose to bromide twenty grains; chloral ten grains; and added one grain of morphia sulphas.

January 24th.—Tongue still paretic, and coated; pains in the inferior extremities. Bromide of potassium discontinued.

February 8th.—Has taken the ten grains of chloral hydrate three times a day, with morphia sulphas at night. Has gained flesh, and is more comfortable than she has been for years. Shall withdraw the morphia gradually.

We have employed the chloral hydrate in whooping cough, combined with bromide of potassium. The intervals between the paroxysms of coughing have been lengthened, and the severity of cough abated. To children between three and four years old we have given the following:

℞.—Chloral Hydratis, } aa., ℈ ij.;
Potassii Bromid, }
Syr. Pruni Virgin., ℥ iss. = 2½ oz. M.

Sig.—Dose, teaspoonful every three or four hours.

We have combined the chloral hydrate with hydrocyanic acid and bromide of potassium with apparently good effects in whooping cough. We believe that chloral hydrate may be made to play an important role in infantile therapeutics.

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ART. II.—TRACHEOTOMY FOR REMOVAL OF A PIN. By JOSEPH W. THOMPSON, M. D., Paducah, Ky.

Mrs. N., about thirty-six or seven years of age, inhaled a pin on the 12th of March last, it lodging in the upper portion of the trachea. The second day after the accident I was called to see her; found her hoarse, with some fever, and an almost incessant hacking cough. Her sister, who was nursing her, said she had paroxysms of suffocation, in each of which it appeared that she would die. I immediately recognized these paroxysms as spasms of the glottis, excited by the presence of the pin, and stated to the patient that there was great danger of her dying in one of these paroxysms if the pin was not removed by opening the trachea. She continued to postpone the operation until the following Saturday (the seventh day), when the spasms of the glottis became so alarming that she gave her consent for the operation to be performed. I opened the trachea in the usual way, the patient losing not more than two teaspoonsful of blood. In attempting to grasp the pin with the curved forceps she coughed and vomited, which partially aroused her from the effects of the chloroform. She then stated to me that she had swallowed the pin into the stomach. I examined the cavity of the trachea again, and found that the pin had disappeared. She recovered promptly, with comparatively little inconvenience.

The principal point that I wish to call attention to is, that after making the incision through the skin, subcutaneous tissues, and fascia, I bent a grooved director so as to accommodate it to

the external incision, and with it dissected down on the trachea; then, in the usual way, opened three rings. I am aware that after the superficial incision is made, that it is the common practice to use the handle of the knife principally in making the dissection down to the trachea. I have performed the operation three times, using the handle of the knife as much as it was advisable, in the first two operations, and the grooved director, as I have before stated, in my last operation. With the grooved director, I dissected down to the trachea much quicker, and with the loss of much less blood than when I used the handle of the knife, as with it I frequently had to resort to the cutting surface of the knife.

Present at the operation, were Drs. D. D. Thompson, E. B. Richardson, J. F. Cole, J. G. Bishop, and H. M. Gilson, who kindly rendered me assistance.

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## ART. III.—TEMPERATURE DURING PREGNANCY, LABOR, AND CHILDBED. By S. BRANDEIS, M. D., Louisville, Ky.

Mr. Squire, in London, published an article under the above title, in the "London Lancet," in 1867.

During pregnancy the temperature is generally somewhat increased, after the sixth month, to an average of 99°.

During a normal parturition the temperature was generally but little higher, the maximum being 99.9°, and the minimum 98.9°.

In the first twenty-four hours after labor there is a fall of temperature observed. With the secretion of milk there is a rise, which gradually disappears as soon as the same is established. The highest figure was 103.3°, on the tenth day. Sleep seemed to diminish the temperature.

For the period of involution, solid food and warm diluent drinks will favor the rising of temperature; the contrary is done

by alcoholic drinks. With reference to the use of the latter, Squire gives the following indications in connection with thermometrical conditions:

1st.—As long as the temperature is rising and the lacteal secretion not fully established, alcoholic stimulants may be useful, and even necessary.

2d.—When the secretion of milk is copious and the temperature high, stimulants are unnecessary, and seem to be even injurious.

3d.—When the secretion of milk is profuse and the temperature low, alcoholic drinks are required.

Dr. Crede, Professor of Midwifery, in Leipsig, read a paper on Thermometrical Investigations in the Puerperal State at the Convention of German Naturalists and Physicians, at Dresden, in 1869.

Since the beginning of 1866 every lying-in woman in his clinic was the subject of thermometrical investigation at least twice a day. He prepared numbers of tables and curves, and finally arranged his cases in the following groups:

1st.—Temperature never above 38 Celsius (bloodheat); perfectly normal cases.

2d.—Sudden rise on the third day, with an early fall to the normal temperature. Afflux of milk to the mammæ, sore nipples, slight contusions, and injuries of the genitals; painful after-pains.

3d.—Rise of temperature on the fourth, fifth, and sixth days, with an early fall to the normal temperature. Constipation most frequently; no material changes; perhaps some indiscretion in diet or physical excitement.

4th.—Rise on the third and fourth days; persistently high for fourteen days; then slow return to normal temperature; complications of slight puerperal affections, with disturbances of digestion; slight exudations surrounding the uterus.

5th.—Rise of temperature on the second, third, and fourth days, persisting in its height for three or four days; then a rapid

fall. Diphtheritic deposits upon the mucous lining of the genitals; slight endometritis.

6th.—Rise from the sixth to eighth day; duration from two to eight days; then a sudden fall; softening and detachment of thrombus in the uterine cavity; general condition scarcely disturbed.

7th.—Rapid and considerable rise of temperature right after labor, as on the first and second day, with long duration and without essential fall. Malignant diseases, terminating either fatally or with slow and exhausting convalescence; endometritis, peritonitis, perimetritis, phlebitis, etc., always, with various and serious complications, with extensive and destructive collections of pus and sanies.

In this manner the author succeeded in demonstrating the intimate connection between a rise in the temperature and disease in the puerperal state.

## ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I—FEMALE DOCTORS—AMENDMENTS PROPOSED TO THE CONSTITUTION OF THE AMERICAN MEDICAL ASSOCIATION—VIEWS OF THE ADVOCATES FOR AND AGAINST THE MOVEMENT—SPIRITED DISCUSSIONS.

For several years the subject of admitting representatives from Female Medical Colleges as delegates to the American Medical Association has been a matter of serious consideration, and on Thursday, May 4th, it was again brought up by an amendment proposed by Dr. Hartshorne, of Philadelphia, at the last annual session. Following is a report of the discussion which followed:

IN FAVOR OF ADOPTION.

Dr. Harding, of Indiana, moved the adoption of this resolution amending the Constitution, viz.: "Nothing in this Constitution shall be so construed as to prevent delegates from colleges in which women are taught and graduated in medicine, and hospitals in which medical women graduates attend, from being received into this Association."

The President: That is proposed as an amendment to the Constitution?

Dr. Harding: Certainly. It requires the action of this Body, however, to make it an amendment. It has been laid over for one year.

I have but a word or two to say in relation to this question, a question which is at issue before the country and before this Association. It has been termed a vexed question. It has been before the Association the last year, the year before, and the year before that, and it is a question that is growing in importance and magnitude. For one, as a member of this Association, I am anxious to see this vexed question determined and settled, and I think this Association owes it to itself to meet fairly and squarely an issue of this kind.

For myself I can see no good reason, if female practitioners of medicine are graduated under as high a standard of requirements as male members of the profession, why they should not be regarded as legally and in fact members of the medical profession.

There is one view of the question that occurs to my mind, which I would like to present and urge upon this Association, and that is, that the sphere of female influence and usefulness is widening and expanding throughout American Society. We all realize that, and it is an aspect of the female character and its usefulness, I think, which is not to be regretted, and in my estimation not to be repressed, and the cold shoulder is not to be turned to it; on the contrary, in its proper and legitimate sphere it should receive the encouragement and the God-speed

of us all; not specially or particularly in the department of medicine, but in everything else.

However we may regard that question, it is an issue before the country, and before this Association. We have ignored it and thrust it aside year by year, and now it becomes us, in a dignified and manly spirit, to meet this question, which is on trial before the tribunal of this Association, and before the country. The idea I wished to suggest to the Society is this: That the widening and extending influence of females in this country, its increasing intelligence and influence cannot be readily thrust aside. There are female applicants for place and for recognition in the regular medical institutions of the country, and that influence we cannot suppress if we would; but if it is shut out, or thrust out from the avenues and thoroughfares of legitimate medicine, it will go to that *ism* or that *pathy*, and the best interests of the science of medicine will be injured by our want of liberality by which we refuse to receive females seeking admission, legitimately and legally, into the ranks of the regular profession. If we thrust them aside, we drive them into homœopathy, into irregular medicine, into empiricism. Let us meet the question like men, in a spirit of liberality and chivalry.

ARGUMENT AGAINST THE AMENDMENT.

Professor N. S. Davis, of Illinois: I hope the question will not be taken until the Association is sure that it understands the full bearings of the adoption of this amendment. I have no personal, or, at least, no strong personal predilections as to how this question shall be settled, so that we understand fully the full meaning, scope, and final result that may follow from the adoption of the amendment.

The amendment is worded so as to state that the Constitution and By-Laws shall not be construed to prevent any college or any hospital that permits females to attend lectures, or graduates from female colleges to attend them under instruction, from being admitted as members of this Body. Now, this

question comes before us from an institution in Philadelphia, but there are many others besides those females in Philadelphia. There are hospitals in which female physicians are operating. There is a hospital in Chicago in which females hold the same relations, and there is a college in New York devoted exclusively to the education of females in medicine. There is another in Philadelphia, and another in Chicago, and I do not know how many more. I speak of these simply that we may comprehend what we are doing. The meaning of that resolution, if adopted, is that those institutions are all eligible to send delegates to this Body, to meet with us here. So far, those institutions which have sent delegates here have not sent females, but men, male representatives, men unexceptionable in their character, men against whom, so far as they are concerned, no fault that I know of can be alleged; but it must be remembered, if we adopt that amendment, it opens the door by which any institution can at any time, instead of sending us a male delegate, send us any female members of their Faculties to sit with us in this Body, and it would undoubtedly result before another year, or at least before two years rolled around, and very likely at our next session, that some of those institutions would send female delegates to participate in our proceedings. I am not saying that they should not do so. I am only stating what would be the legitimate result, so that we can vote understandingly.

Now, Mr. President, let every one consider fairly and fully whether the time has come or not that we, as the great representative Body of this profession in our country, are ready by deliberate action to open the door and welcome the female portion of the community, not only into our profession, but into all the professions? Is the time come? Do we desire it ever to come? Is there any difference in the sexes? Were they designed for any different spheres? Are we to heed that law plainly imprinted upon the human race, or are we, as a Body, to yield to the popular breeze of the times, and say it must come, and therefore we will yield to it? Now, I make no

comparison between the sexes; I claim that there is no comparison to be made. The female in her proper sphere is just as far superior to man, as man in his sphere is superior to woman. [Applause.] You, sir, and I, can no more do properly the work that God designed for woman than she can do the work designed for you and me to do. [Applause.]

RESULT OF THIS SPIRIT.

What will be the result of yielding to this spirit? The result will not only be in one direction, that we are to open the occupation for women to come up, as they term it—though it is not up in my estimate at all, but it is looked upon as coming up by some—to give her the right to come into the profession, but we are to break down the barriers, we are to destroy that which God has imprinted upon our race as the distinction between male and female in the operations of this world. It is not merely that she is to come into the circle of lawyers and into the profession of medicine, but she is to go into the pulpit, the rostrum, and on to the platform; and there is another direction in which she must come in, and that is, she must come in the direction of the school, the spade, and every avocation of life. The great distinctive feature, impressed upon civilization by the religion given to us, by our Christian character, has tended at every step to lift woman, to bring her from the position of slavery and degradation that barbarism put upon her, to that lofty pinnacle where, with reverence, we bow in homage to her, in that condition whereby with her influence she makes her impress upon the youth of our land. Let her remain in that sphere; let her make that impress; let her status and her mission in the world be held sacred; let no man anywhere say aught against her ability or her dignity in regard to her mission, but do not let us yield to popular clamor about woman's rights, or man's rights, or anybody else's rights, and by so doing stultify the laws of the universe. [Applause.]

Now, Mr. President, these are, plainly, my sentiments. I said, in rising, that I had no strong predilections in the matter. I am not prejudiced, because I have lectured to women in the

same class with men day after day in the lecture-room in the Medical College, and I have stripped patients' chests, and women have examined and have listened with the stethoscope to their ears, and have attended to the whole subject matter, and in other cases I have not reserved anything which I should have said if they were not there, but after all the experience which I have had, and I say it plainly, that experience has caused me, and those acting with me, to decide to have no mixture of the sexes. The experience I have had teaches me that, and I think the world would be better, civilization would go on faster, and men and women would be better off if each sex were to act in its own proper sphere, and do not lend our influence to the popular clamor. I say it would be well if men and women would stop the eternal wrangling about rights, and each would ask his or her own conscience a little more day by day, What is my duty and what are my obligations?

Dr. Donahue, of Iowa, moved to lay the resolution upon the table.

The Vice-President (Dr. Weatherly) in the chair: The motion is not debatable.

Dr. Davis: I hope there will be no disposition manifested to cut off debate.

Dr. Donahue withdraws the motion to lay on the table.

ARRAYED ON THE SIDE OF WOMAN.

Dr. James King, of Pittsburg: I am not accustomed to speaking on this question of woman's petition. It has been so much brought up in the Society of Pennsylvania—the State Medical Society—that I want it settled, and I rise for the purpose of stating somewhat of what is the attitude of that question in our city.

It has been debated in our Society for a number of years, every year warmly and earnestly debated, and when the vote was taken I remember, on one occasion, it stood 47 on one side and 45 on the other—a majority of two against the woman. Such arguments as have been urged by the learned gentleman, who has just taken his seat, I have heard repeatedly over and

over there, and I have generally found myself arrayed on the side of the woman. I think, sir, that this war against the women is beneath the dignity of a learned Society of scientific men. It would better become us if we would go with General Crooke to Arizona to fight the Indians if we must gratify our bellicose dispositions, rather than to carry on this war against women.

Mr. President, I agree perfectly with the gentleman who has taken his seat. That woman in her sphere is superior to man, and man in his sphere is superior to woman; I would sustain that proposition with as much earnestness as he has done; but the gist of the question, after all, is: What is woman's sphere? Perhaps the gentleman has obtained his idea of it from India. A woman in India never appears in the street unless veiled, and never appears in the parlor of her lord; her place is back in the kitchen, or in the open field,

> "Doomed by the law of man to toil,
> Grouped with the beast and fettered to the soil."

That is the idea of woman's sphere in India, but the tendency of Christian civilization everywhere has been to lift her out of degradation to which man would consign her.

Now, sir, is not the practice of medicine an honorable calling? Is it not a noble calling? Is there anything that does not call forth all there is in the heart of a man or all there is in the heart of a woman? What is there in it that is degrading? Sir, if I thought it was degrading, I should abandon it to-day. It is an honorable and noble calling, and there are some gifted minds in it who ignore the distinctions of sex or complexion, and hold that it is beneath the dignity of an honorable Association like this to repress this rising tendency—that it is beneath the dignity of that profession to say: "Thus far shalt thou go and no farther." It is said:

> "When pain and anguish wring the brow,
> A ministering angel thou."

That she is all very well as a nurse, but, say they: "You cannot come in as a physician, not at all; you have not mind

enough." This is the argument. *We* have the intellect—not the women; they are poor silly runners after fashion, and what do they know about intellect? Why, sir, it is because woman has been kept in the background—because she has been kept down, that she has not manifested her superior intellect. I have read some of the writings of one of the professors in the Womans' Medical School, which Dr. Thomas comes here to represent, and I must say, so far as my judgment goes, those writings are equal to the writings of any other professors in Philadelphia, in the way of pith and point.

Now, Mr. President, I want to see this question settled, and I want this war against woman ended. To show the tendency of this thing, I will give you an illustration of an important question that occurred in Williamsport, Lycoming county, Pennsylvania. There was a lady professor of acknowledged merit, highly educated in her profession—a lady who had no disposition to do anything else than pursue the code of ethics, so called. There was a friend of mine, a worthy physician in that place, who was applied to as a consulting physician, and he went to visit the patient of this lady, and the reason why he was asked to do so, was that he had experience in just such cases; he went into the room, and what did he do? Why, just what he was bound to do by the laws of the Medical Society of Pennsylvania, that is, if we stand by its law, he was bound by those rules to turn her off: "Turn that woman out of the house, and I will come in and attend to the case!" Sir, I would rather have cut off my right arm than have done so mean a thing; the meanest and most contemptible thing that a highly educated and honorable physician could do; the meanest possible thing for a physician to say in regard to his juniors, or in regard to one who in other respects would associate upon an equality with him, and especially in regard to a woman, who is excluded by the rules of the Society, is to say: "Walk out of the room, and let me have the case; you are not recognized, and I have the right to attend to it." Sir, an honorable and educated physician will never do such a thing as that. Now, sir, let us not

stultify ourselves in this regard. I find, in reading over a document, which I have in my hand, an account of a hospital in Philadelphia, and the medical staff of that hospital is headed by the name of Mrs. Ann Preston, and I see among the consulting physicians of that Institution, presided over by female physicians, the name of the honorable President of the American Medical Association, the gentleman who adorns the chair, and who delivered to us yesterday so eloquent a speech, Alfred Stille, M. D., Ellwood Wilson, Albert H. Smith, Henry Hartshorne, John Forsyth Meigs, Thomas G. Morton, and S. Weir Mitchell. Now, can you find a nobler set of men belonging to the medical profession in the city of Philadelphia? I trow not. And these gentlemen are the consulting physicians, in violation of a resolution which stands upon record in the Philadelphia Medical Society, which resolution visits the penalty of expulsion upon any member who will consult with a female physician. We have a woman in the chair of that Institution, and the distinguished Professor of the Practice of Medicine in the University of Philadelphia, Dr. Stille, a man who adorns that position, does not hesitate to consult with female physicians; certainly it is a thing he has a right to do, and under certain circumstances. Now, sir, having elevated him to that position, I say we have to recognize his position in this respect, otherwise we stultify ourselves by this war upon women. [Applause.]

A VOICE FROM CALIFORNIA.

Professor Henry Gibbons, of San Francisco, Cal.: It has been several years since I commenced active practice—in the early period of my life—and I never yet stood upon a platform in which this question was brought up, but upon this occasion I am inclined to place myself upon the record in regard to this question, whether popular or unpopular, in respect to profession or the outside world.

I have listened, I must confess, with some degree of surprise to some of the remarks that have been here offered by my worthy friend, Dr. Davis—a man who holds almost the highest place in the profession. He rather astonished me by assuming

the position he had, and which savored very much of that kind of logic attributed yesterday by our worthy President to the female sex, an *ad captandum* form of argument, alluding to the terrible position in which we should be thrown if a woman should come here as a delegate to this Society and claim a seat by our sides. The terrible picture which he presented, I have no doubt, almost caused the blood to curdle in the veins of some in this room. I almost forgot at the moment, carried away by his enthusiasm, that my mother was a woman, and that I had any respect for that class of animals, existing in creation, known as woman; further than that, he linked the question at present under consideration with the idea of female suffrage, female voting, and he told us of females aspiring to every department in life. This is exactly in accordance with the old *ad captandum* style of argument which he has himself, doubtless, heard and answered a thousand times in days past, when he stood up for the rights of man, irrespective of color: "Would you have your daughter marry a 'nigger?'" There is the whole gist of the argument on that point in regard to this Association. I have never gone as far as my friend has; I have never taught mixed classes of males and females; I have never stripped a "subject" upon the dissecting table in the presence of both men and women who are students; and, what is more, I am never likely to. It is not likely that I shall ever do it. I have never gone so far in that respect as my brother, Dr. Davis; I acknowledge a limit in these things. There are certain limitations in regard to the position of women in the profession which I do acknowledge, and the idea of teaching them in mixed classes, the promiscuous intermingling of them in our schools and hospitals I utterly repudiate. [Applause.] But when it comes to the abstract right of a woman to study medicine, and to perfect herself in the science and art, and to be acknowledged on a par with man, if she shows herself to be his equal, I cannot, for the life of me, see what reasonable objection there can be to such a proposition as that. I am not jealous of the ascendency of woman. If a woman can teach herself, or be

taught, the science of medicine; if she can perfect herself in the healing art, and comes forward in the same circle of society in which I move, I am not going to repudiate her because she is a woman. If she is capable of competing with me, I will allow her a chance of competition, and I will not trample her under foot because she is not dressed in breeches. [Applause.]

THE COURSE IT IS TAKING.

Mr. President, standing here, as I do, upon the extreme verge of our continent—and looking abroad over the world—as I think, with an impartial eye, not within the whirl and confusion of this question as it has been agitating our brethren in the Atlantic States, standing here impartially, as I consider, looking at the great field of action over the world, looking at the course things are taking, looking at the progress that has been made within a few years past, by the female sex, in this direction of medical education, and being capable, as I conceive myself, of considering it with some degree of impartiality—placing my hands every day upon journals from different parts of the world, observing the course that this question has taken in the world, everywhere, seeing that a very large number of the brightest lights of the medical profession are favorable to giving license to women, in regard to the practice of medicine and education as physicians, observing what is going on in the old countries in Europe—in London, where Mrs. Garrett, Doctress Garrett, if you will, received the highest vote of merit in the London Board of Education, and in that Board she has acquitted herself so well as to be, it is stated, the most popular member of the Board, speaking, it is said, only when proper, and withholding expression with remarkable judgment; seeing that in Edinburgh and in other parts of the Old World the doors of the medical schools are more and more opened every day to the medical education of women; seeing that where women have had these chances of rising with man on the platform of medical education, they have almost invariably done the profession honor and themselves credit, and become highly respected in the circles in which they moved; seeing that in America the

cause of female education has been going forward at a rapid rate, promoted rather than retarded by the resistance presented by medical authority, I think the day is come, Mr. President, I think the day is finally come upon us when we must admit, to some extent, the prevailing sentiment as to the propriety of female education; and in receiving it, as we are now doing, we are cutting ourselves off from the aid of a large number of individuals who would be honorable to the profession and useful to us when associated with us; and not only that, but we are weakening the bonds connecting us with many of our brethren who are the brightest luminaries within the horizon of medicine, who are associated, as in the case of President Stille and other eminent men in Philadelphia, with female institutions. Now, are we prepared to do this? The longer you oppose resistance to this current, the stronger it becomes by opposing it. We shall add the force of Niagara to the current that is coming down upon us, upon this question of female education, and the result will be, if we persevere in maintaining the position we now hold, that we shall not only fail in accomplishing our purpose, but we shall ourselves be swept away by the current. [Applause.]

Apart from principle, there is something due to policy. I would not give up principle for the sake of policy at all, but where principle and policy coincide, there, I say, it is proper and legitimate to look a little to the question of policy. I do not wish to prolong these remarks with regard to the time that is before me, and I have not a long time before me in my career, but I have examined this question, I think, fully and impartially, and I wish to place myself upon the record in the position which I have defined here at this time. I feel confident whether it is regarded as a matter of policy or a matter of principle. I feel confident as to what the coming day will do. It will not do what the clamorous advocates of woman's rights are now aiming to accomplish—that I am willing to acknowledge—but it will do something, it will bring forward the female sex on an equality with man on the score of medical education

when the parties are properly deserving of being thus put forward. That is what it will do. That is the only point I am aiming at here, and I want my friends here, men who have been old acquaintances of mine, and whom I have not seen for twenty-five or thirty years until I had the unspeakable enjoyment of taking them by the hand during this Convention, to know where I stand on this occasion at the present time, and I want to be placed upon the record on this question in view of the coming time—the time when our children will settle it irrespective of the action we may take at the present moment.

OPPOSITION TO THE ADMISSION.

Professor Johnson, of Missouri: I have listened with pleasure to the discussion of the amendment of our Constitution with regard to woman, and I confess, sir, that my mind is not fully made up upon it. Nevertheless, it is sufficiently so to enable me to state my own impressions with reference to this question, and what should guide us to a proper solution of it.

In the first place, I do not understand that woman has asked admission to this floor. We have had delegates sent by the medical schools of Philadelphia, or the Societies there, but they have had male representatives, and I believe, if I am correctly informed, that they were not admitted at the first meeting at which they were proposed for admission, and from the fact that they were not admitted, this amendment was proposed by one of the delegates who was denied admission as a delegate, but simply claimed the privilege of offering it as a permanent member. Now, sir, I am wholly opposed to the admission of women here. I am willing to accord to them every right and every privilege that, as citizens, they claim under the Constitution of the United States of America; I would not throw an obstacle in the way of a woman being admitted to the very highest point to which she is susceptible; I would not deny them any privilege in relation to the formation of societies or the formation of colleges, or the formation of institutions of any kind whenever and wherever they choose to establish them, and I would bid them God-speed; but I would like to know why the

question is forced upon us here, for it has been forced upon us. This Association has never made war upon woman; it has never declared war, but the fire-brand was forced upon us, and we are obliged to meet the question. The war was declared on the other side, and I stand here as a member of this Association and say let women have as many medical associations as they choose, and let them attend to their own business, which they generally know pretty well how to manage; let them attend to their own business, and we will attend to ours. Look at the religious associations of women, and other associations. Do men ask or claim the privilege of going into them? Look at their benevolent societies and associations which they attend to themselves; they do not ask the co-operation of men, nor do we want the co-operation of women. [Applause.]

I tell you, gentlemen, this is not so light and frivolous a subject as some of us are disposed to treat it. I have looked upon the question somewhat, and I tell you that the sanctity and the sacredness of home is about to be invaded upon this question. [Applause.] Some of us have recollections of home—recollections which I trust we all have—and if there is any position in which woman presides in a Godlike position, it is as that of a mother; and I would like to know what a woman in that position would do in this Association? A mother, with children at home, and her duties at home in that legitimate sphere in which she was created to move? I say let her stay at home and put on an apron, and attend to her children, and not come to a Medical Association. [Applause.] Why, we should expect to see a woman here in breeches, as the gentleman stated just now; not only that, but we should expect to see men with women's clothes on. It is all very well to say that we do not allow them to come here, by this argument; but, gentlemen, this is one of the steps, and ridiculous as it may seem, it will end in that. Women will become men, and men women, in disposition and character; because one or the other must rule, and one or the other must be at the head, and either the man or the woman must be master; and that is the very gist of the

whole question. Now, sir, I am opposed to this. I for one am willing to meet this question fairly and squarely, and I say this Body will stultify itself by the admission of women. It was not contemplated in the original Association that it should ever have women among its members; it was never supposed that the question would ever be brought up before us, but it has been brought up before us, and I am for meeting it here to-day, and I am entirely opposed either to the reception of women, or the reception of any representatives of women from any college or other institution,

WHAT PENNSYLVANIA WANTS.

Dr. Atlee, of Philadelphia: We of Philadelphia have been asked why this question was brought before this Body? We have not brought it here to-day, but our worthy President has presented it before you. That answers the question of the gentleman in regard to that.

Dr. Johnson, of Missouri: I ask the pardon of the gentleman. The amendment was proposed by Professor Hartshorne, representing the Female College of Philadelphia, at the last session.

Dr. Atlee: That may be granted, but in Cincinnati, you will remember, Dr. Davis got up and told us to settle all our difficulties at home; to go back to Pennsylvania and settle our difficulties, but when we got back to Pennsylvania, we were told to go to the American Medical Association and get admission there, and then come back to that Society. Now, what are we to do? We are bounded from one Association to the other in shuttlecock and battle-door style, and how are we to act? We are sent back to Pennsylvania, and Pennsylvania sends us back here, and we are now here. The whole question comes down to one simple point, and that is this: Does the code of ethics, which is the supreme law of this Institution, prevent any institution being represented here that complies with that code? Unfortunately, this opposition to female colleges generally comes from the professors or controllers of other colleges. Is that the position in which they wish to place themselves? Is

it proper, as a medical organization, to put our feet down upon another organization merely on account of sex, when there are colleges standing up before the community that teach just precisely as other colleges do, and that stand, in many respects, better than many others of the colleges represented here, colleges which give obstetrical and clinical instruction, when a majority of the colleges represented here have no such instructions; have no clinical instruction? These institutions are chartered by the Legislature of Pennsylvania, and there can be no exceptions made to them except upon the score of sex. Now do we, by our code of ethics, undertake to suppress them? I say it is unjust, it is unconstitutional, and we have no right to do it by our code of ethics.

DARE NOT CONSULT THE FEMALES.

Putting aside the qualifications of sex, we meet with many arguments which the gentlemen bring up here; but let them go into the medical profession and see if they themselves stand any higher than the well-educated female physician. By the rules of our Medical Association, I dare not consult with the most highly educated female physician, and yet I may consult with the most ignorant masculine ass in the medical profession. Is that right, sir? Qualification ought to govern this matter, and not sex or caste. [Applause.] I hold in my hand an announcement of the Women's Medical College, of Philadelphia, and I ask those gentlemen who are standing in opposition to that College, constituted as that is, to say whether there is anything in it that is not based substantially upon as correct principles as any in the land? You may take the first institution of Pennsylvania, the University of Pennsylvania, and compare both together, and you will find the one standing in the same position as the other. [Applause.]

All these discussions about sex and the proper position or sphere of women are out of the question, as it appears to me in this matter. For woman is not always a mother; she has not always the blessing of being a wife. There are various positions for women connected with domestic duties. Many women earn

a livelihood over the wash-tub, and many others by the needle, and why should they not as well by the profession of medicine? If they do not come up to the highest position, that is no reason why they should not practice it, because how many hundreds of our sex fail to arrive at a high position, and yet they practice the profession; and if they get into difficulty, they claim the assistance of men who are higher in the profession to assist them out of their difficulties, and why should not women have the same privilege? Sir, I think it inhuman for a Body like this to put its foot upon the weaker sex, as this Body appears to intend to do, and keep them down. Let us rather elevate them to the proper position to which they are aspiring.

Now, sir, we in Pennsylvania are not only prevented from consulting with any female, no matter how well she stands upon the code of ethics, but we are prevented from consulting with male practitioners of an institution, with the consulting physicians of an institution, which our President, whom we have elevated to the highest position in this country, in the profession, is associated in. I dare not consult with him without endangering myself to the penalty of being expelled from the Pennsylvania Society. That is the position in which you have placed the man whom you have thus elevated, and I am amenable to the discipline of that Society and this Association if I consult with him.

Now the question, it appears to me, comes down to one simple point, and that is this: Here a code of ethics refuses admission to a Female College, when based upon the same principles as all other colleges are based upon. I care not what may be the qualifications of an individual, if he fulfills all the duties of his profession, or comes up to the code of ethics of the American Medical Association; if he is a graduate of medicine, a physician in regular standing, I will consult with him, and I should like to have the same privilege of consulting with any physician, whether male or female. Qualification, and not sex, ought to be the discriminating point between members of the medical profession.

As one gentleman has remarked, females have made no application to be heard as delegates, but they have been represented by male representatives. I think that is proper. I do not object to ladies being present with us, because we have them here in all our transactions, and we are always glad to see them, and they infuse into our meetings a very happy influence [applause;] but the point, I think, is sufficient that I make, that it is a matter of qualification and ethics, and not of sex.

I shall now call upon the delegate from Woman's College (Dr. Thomas) who is present, requesting him to present his views upon the matter. I believe he has already been admitted upon the report of the Committee of Arrangements, and I hope that he will have a proper hearing.

NOT A QUESTION OF COMPETENCY.

Dr. A. L. McArthur, of Illinois, obtained the floor and said: It seems to me there are several questions being discussed in regard to the proposition now before the Association. All arguments in reference to Woman's sphere seem to me irrelevant. We have nothing to do with whether or not she is competent for a physician, a lawyer, or a minister, but the question is, whether it is the bounden duty of this Association to receive women as delegates. Let women be educated in every department of science, every profession, if she chooses. If Dr. Davis were to desire his son matriculated in the Woman's College of Chicago, no one would complain if he were recognized. Let women have their colleges, and if they choose their American Association, and we will welcome them to the entire field of medicine. If a woman can cope with a man in surgery and medicine, let her do it, and I should be willing to consult with a female who was properly educated as a surgeon or physician; but that we shall associate with them or their colleges is quite another thing. I have had some experience in the bringing of ladies and gentlemen together in a clinic, and there is something in the nature of man, and I hope in that of every woman, that revolts at the idea. [Applause.] I am opposed to uniting the sexes in the colleges and in associations, while at the same time

I would not raise a barrier against the progress of woman in the field of medicine and surgery.

REMARKS OF DR. THOMAS.

Professor C. H. Thomas, of Philadelphia: The remarks of the gentleman who just sat down struck me in some respects as being exceedingly just. However, he raises a question at the close of his remarks on which I cannot agree with him. The remarks also of the eminent gentleman who preceded him, Dr. Johnson, of Missouri, I believe, whom I have not the pleasure of knowing personally, relate to the same question. Why does the women's medical interest desire to be represented here? Why do they wish to mix with men? The question is rather a complicated one. I say, however, to you, as matter of fact, that the ladies do not wish to be educated in common with men, in medicine, at all. They prefer a contrary method. In the Woman's Medical College in Pennsylvania, which I have the honor to represent, we have no men present as students, nor will we have any! In our hospital no men students are present, and we will have none. We do not wish that at all. If we were admitted into the large hospitals with students we would prefer that they should go by themselves or attend the demonstrations of cases only of a strictly general character; but the question is asked, Why do we wish representation? Why do women force themselves in here? Why does that Body, in other words, send me here, unworthy as I feel myself for the work that is to be done—work of such great magnitude—much greater than many have an idea of? In the Eastern States the medical education of females has already become a very important matter. I have a list in my hand of hospitals in which we have graduates scattered now all over the land. And I hold in my hand a package of letters which I received in reply to a circular letter, inquiring what difficulties ladies suffer under for want of recognition. If I could have time to read extracts from these letters, I can assure you that many of you would be astonished and indignant at the illiberality of medical men, and the unfairness with which ladies have been dealt with by medical societies.

Respectable members of the profession dare not consult with ladies. In that city in which I reside, the County Medical Society established the rule, and it was afterwards adopted by the State Society, making it an expulsory offence for a medical man to consult with a woman, and further than that, for any man to teach a woman medicine, and further than that—if any man shall consult with a man who dares to teach a woman, or consult with a woman, he receives the same penalty. That is the position in which we stand there. That distinguished surgeon, Dr. Atlee, has well said he dare not consult with a man who teaches women or consults with a woman. He dare not even consult with our President, Professor Stille, for Professor Stille consults with women, and therefore Dr. Atlee dare not consult with him. I say, further, that Dr. Atlee held a consistent position in this matter. He will make no rebellion in the Medical Association, and will do nothing against the laws of those societies, preferring to fight out the battle with them. Several gentlemen say they have their common rights taken away by this rule, the rights which God gave them at their birth, and they prefer to break the law, but Dr. Atlee says: "I will not break the law," and therefore he never dares to consult with Dr. Stille. I have been asked why I came here, and I think I have now answered it. I should be glad to answer further, and glad if I had this to say for Pennsylvania alone. Now, in other States, the situation is nearly the same. Here are packages of letters which tell me that County Societies, where the writers reside, forbid their members consulting with them. That is an expulsory offence in many cases. These ladies are called in to attend difficult cases, and they desire, like every practitioner, to have consultation; but they are not only refused consultation, but when their names are mentioned to these practitioners by the patients of these ladies or their families, they are told, "Why, your physician is not a physician. Her diploma is not recognized by the American Medical Association." That is what I came here for to-day. It is to ask you to admit us to a just position. We want to be judged by our merits—nothing else.

I would like, and I ask it, that a committee of the American Medical Association be appointed to examine our institution; to examine into the methods of teaching and into the terms of our lectures, which are now five months and a half. I would like the graduates of the past year to be put through the same examination that you did the graduates of the other colleges. I see eminent professors here, and I would like these very gentlemen to re-examine them, and see whether or not they are fitted for equal rights in the profession with men.

Much has been said in regard to the ill that may happen if we allow these women to "unsex themselves." It is a frightful theme, to be sure, and the horrors of it have been hinted at, though it is hard to define exactly what they are. Gentlemen, I have seen these women in practice, and I shall presently read the names of gentlemen who have consulted with them. I know these ladies well, and know they are not "unsexed women." Some of them are wives and mothers, some have their families dependent upon them, and one lady has a paralyzed husband, and that lady is a most distinguished lady graduate of the Maternite Hospital in Paris, holding the certificate of the Ecole de Medicine of Paris. We find this lady in the condition of having a paralyzed husband and a dependent family; though, however, she is in an excellent practice and drives her carriage, and is recognized by every physician who knows her, as a woman of eminent ability in the profession in which she is practicing.

### FEMALE PHYSICIANS RECOGNIZED.

I do not wish to occupy too much time, but there are some points I do wish to come to. One is this: That our lady graduates are already recognized by many physicians, in spite of societies, and especially so in some parts of Pennsylvania. In the Montgomery County Medical Association of Pennsylvania, Doctress Anna Lukens, one of our lady graduates, was elected last year. That, however, placed that Society outside the pale of the Pennsylvania Medical Society, if that Society ever dare to enforce its rule. They were challenged last year in Phila-

delphia to enforce that rule, and they dare not. Dr. Traill Green rose and said, and I have the report with me: "Gentlemen, I dare you to enforce this most unjust law." Dr. Parrish rose and said: "I will consult with women if I choose, in spite of any law of any Association!" It has been done again and again, and the Society dared not come up to the enforcement of its penalty. Yet, in some of the other States, our graduates stand in as bad positions. And laws so filled with evil that they cannot be enforced in the face of the community, are still used covertly to their serious prejudice.

In order to prove to you that some physicians do consult with women, I hold in my hand a list of hospitals where women are attending physicians, and where a consulting staff has been in active service with them for a greater or less length of time. The gentleman (Dr. Keating, of Pittsburg) read a list of the consulting staff of the Hospital which I have the honor to represent, the Woman's Hospital of Philadelphia, including Dr. Stille, Dr. Hartshorne, Dr. John Forsythe Meiggs, S. Weir Mitchell, Elwood Wilson, and the rest. I have here also the consulting staff of the Dispensary Department of the Woman's Institute in New York City, and though its regular physician is a graduate of our college and a woman, we find associated with her as consulting surgeons, Dr. Willard Parker, Dr. Frank H. Hamilton, and Dr. S. B. Ward, and Dr. Noyes and St. John Roosa consulting oculists and aurists, and as consulting physicians, Fordyce Barker, W. A. Hammond, T. Gaillard Thomas, and Frederick B. Lente. Those are names of gentlemen who dare to consult with a woman whom they know is a good physician, and who has been in the same institution with her a considerable length of time. I find, also, another institution in New York—"The New York Infirmary"—presided over by a graduate of our college, and the consulting physicians of that institution are Willard Parker, James R. Wood, William H. Van Buren, Thomas A. Emmet, Isaac E. Taylor, Gustavus A. Sabine, Austin Flint, Thomas F. Cock, and T. G. Thomas. So, you find some of the same men consulting physicians in that in-

stitution again. Still another one: "The Western Dispensary for Women and Children," presided over by a woman who graduated from the college I represent. The consulting physicians are A. Jacobi, J. B. Reynolds, J. R. Leaming, and Foster Swift. The consulting surgeons are C. C. Terry, Benj. Howard, S. B. Ward, and H. G. Piffard, and the attending physician is Doctress Mary E. Greene. In Boston we go a step further, and I will read but a very few more names. I have not the published circular, but from my personal knowledge, having talked with some of them myself, I know that among the consulting physicians are Professor Calvin Ellis, Dean of the Medical Department of Harvard University, Dr. Henry I. Bowditch, Dr. Samuel Cabot, and Dr. Walter Channing. Dr. Bowditch consults frequently with lady physicians, and he told me himself that he defied the Massachusetts Medical Society to lay any law upon him to prohibit him from consulting with a woman, because from his personal knowledge, they were reliable, excellent physicians.

A single point in passing—lest I forget it, because this is not a prepared address, and I had no idea that it would be advisable for me to speak. There are some who seem to fear that ladies are going to attempt surgery and all difficult operations going under that name; that they expect to put themselves into all that class of work of ordinary practice which seems to be considered the special province of men to fill. Let me say as a practical fact—facts, they say, are stuborn things, and I know some times they are stupid things—but this is a fact which I claim to be relevant. We find for reference, that women practically restrict themselves to a single or special department. Of the women I have the honor to know, and several of them are already venerable in the practice—and Professor Ann Preston at the head of them, a most distinguished and refined lady and an excellent physician—I find that women practically treat their own sex and children almost exclusively. This is the practical result, no matter what the possibilities are that may be suggested.

ATTAINED MAJORITY.

Now, gentlemen, the College I represent has attained its majority this year. It is twenty-one years old, and I ask, that as a full-grown honorable institution, it be admitted in the same class with the rest of the colleges in the land. We ask to be examined as to what we are teaching and how much, and we want our students examined, and if any other institution in the land will put its students by the side of ours to be examined, we will most gladly accept the position.

I will ask to detain the Association a single moment longer. It will not be more—knowing the pressure of business upon it—than that, in regard to the College I represent and the position we assume; for we have made a great advance, in our opinion, as regards teaching. We have instituted a method by which the studies of our classes are rendered more thorough. We examine them at the close of the second year in anatomy, physiology, materia medica, and chemistry, and when they pass that examination, we allow a third year for the practical branches—surgery, obstetrics, diseases of children, and practice of medicine. At the end of the third year, if qualified in the latter, they are eligible to their degree. We believe this is an advance, and ours was the first institution to carry it into operation and effect. We believe we have already done something for the cause of professional education. Still further than that, we find as a matter of fact that other colleges are beginning to admit our status. We find that the Medical Department of the University of Michigan has just graduated a lady upon one course of lectures who had studied with us two years, thus admitting us to recognition and placing us upon their *ad eundem* list. One of the professors of that institution is present here, and he told me that this lady passed a creditable examination, so much so that any college in the land need not be ashamed of her. These are facts, and under the circumstances, in the hurry of the hour, and the shortness of the session, I forbear drawing any conclusions from them. I prefer that each member should draw his own conclusions for himself.

[Dr. Thomas was listened to throughout with marked attention.]

Dr. Moore, of Boston: I have listened with interest to the remarks of the gentlemen on both sides of the question. I think they have ventilated themselves fully. I trust now we shall bring the subject to a close. I have been a member of this Institution almost from its commencement, though, unfortunately, I have not been able to attend every meeting. I did not expect that the subject of woman's rights would ever come up before us. I am not opposed to women, but I am opposed to their coming into this Association. As a man, I would wish to see woman educated, and am always willing to advise and assist them if I can do it, and I trust the other gentlemen will do so. We don't ignore women, nor deny their intelligence. We want intelligence among ourselves. I think we have talked sufficiently upon this subject. If women can be educated to do more good in the community than men can, let them do so without hindrance, but I do object to their coming into this Association. I hope they will have an Association of their own, and possibly they may show us that they can excel us. I move, in order to put the subject at rest, that the whole subject matter be indefinitely postponed.

The vote was taken by ayes and noes, and the Secretary announced the result as 80 ayes to 25 noes.

So the proposition to amend the Constitution was indefinitely postponed.

### THE SUBJECT RENEWED.

At the morning session of the Association on Friday, the subject was renewed by Dr. Atlee, of Philadelphia, who offered the following resolution:

*Resolved*, That the American Medical Association acknowledges the right of its members to meet in consultation the graduates and teachers of Women's Medical Colleges, provided the code of ethics of the Association is observed.

Dr. Storer said the subject had been discussed fully yesterday. The Association should be careful how it acted; it in-

volved the lives of many members of the community. The question had been discussed fully; he was not present; if he had been he would have presented arguments against the matter that had not been touched upon. It had been settled by a viva voce vote of the Association, which was almost unanimous. He protested against the measure coming up again; it had been indefinitely postponed. Dr. Atlee undoubtedly was moved by good motives in offering this resolution; he was not actuated as some were, to have the consultation fees flow into his pockets.

Dr. Johnson said he hoped the resolution would be adopted. It was not to admit women on this floor, but to enable the physicians of Pennsylvania to consult with women. He was willing to grant women all privileges, and if they wanted associations of their own, let them establish them, and he would bid them God-speed. In justice to the gentleman from Pennsylvania, the resolution should be adopted, as they were not recognized as regular practitioners by the local Societies; and he understood even the venerable gentleman now in the chair (Dr. Stille) was not recognized.

Dr. Stille: Such is the case.

Dr. Johnson resumed, saying he did not consider it unprofessional for practitioners to consult with women. All barriers in that respect should be removed. [Applause.]

At this point, Dr. Gibbons, Sr., interrupted the speaker, and called for the reading of the resolution.

Dr. Storer: I move to lay the resolution on the table.

Dr. Johnson: Can a motion be made while I have the floor? [Applause.]

President: No, sir.

Dr. Johnson concluded his remarks by stating that according to the existing state of affairs, even members of the Association could not consult with the President, who was one of the consulting physicians of a Female Medical College of Philadelphia, without violating its laws.

Dr. Weatherly said there was nothing in the code of ethics of the Association preventing physicians from consulting with

women. If local Societies had it on their statute books, they could not help it.

Cries of "Question," "Dr. Atlee."

Dr. Atlee: We are sent here by our State Society to get the endorsement of the American Medical Association, just to that purpose. They say that the Pennsylvania Association oppose our action. We ask your endorsement for a privilege which is exercised by Dr. Johnson, and should be by every other medical man in the Union. But we are tabooed, and we dare not consult with a female physician when the Medical Association forbids it. We are tabooed, and what we seek is to have the rules of the Pennsylvania State Association abolished, in hopes that we then will be free to act as men in other parts of the country act, that is all we ask.

Dr. McArthur: Inasmuch as I made a very few remarks touching the matter yesterday, I wish to say to the Association that as I understand it, the American Medical Association is not a body from whom we require primary legislation. It is rather a court of appeal.

Dr. Atlee: We are here now on an appeal.

Dr. McArthur resumes: I understand that the city of Philadelphia has invited the American Medical Association to hold its next session there. I understand further, that the physicians of that State and city are divided upon this question, and we do not wish, as an Association, to go into the city of Philadelphia, where we expect the hospitalities of the profession upon any uncertain footing. Now, this is no question of ethics that comes up from any Association of the city of Philadelphia. If it were, then we would feel called upon to adjudicate upon the matter; but I say here, there is not one word or one sentence in the ethics of the American Medical Association that prevents any member of the profession to consult with any lady physician who is fully qualified to practice her profession.

Dr. Gibbons, Sr.: Then why not say so? [Applause.]

Dr. McArthur: Because it is unnecessary. It would be a work of supererogation. There is not the least call for it.

When the matter comes up from any Association of the State of Philadelphia, then it will be time for the American Association to adjudicate upon the matter.

Cries of "Question," and confusion.

Dr. Gibbons, Sr.: One word; I shall not detain the meeting. Does the gentleman say there is not the least occasion for action of this kind when the President of this Association stands here in the preposterous attitude of a man tabooed from consulting with members of the State Association? When Dr. Atlee, a distinguished surgeon of Philadelphia, dare not consult with the President of this Association for fear of expulsion from his State Society, do you tell me there is no occasion for action in this case? Do you tell me that when a motion of this kind will settle the discord existing in the State of Pennsylvania, and place their position in accord with that of the physicians of all the States of the Union this knotty question will be set at rest, as it will be by this resolution, for it is only the declaration of a truth? [Applause.] The only objection urged to it is that it is superfluous. If it is superfluous, what harm can it do? Adopt the superfluity, for the sake of peace, for the sake of harmony, and for the sake of consistency. [Applause, and loud calls of question!]

The President caused the resolution to be read again.

AN AMENDMENT OFFERED.

Dr. Toner: I propose to amend that resolution by adding "when their supporters are recognized by the local and State Medical Societies."

Dr. Storer: That is not the motion. I made a motion to lay this whole matter on the table.

Dr. Storer endeavored to get a hearing, but was prevented from speaking by the President.

Dr. Storer: I ought to have a chance to be heard. The Chair allowed one or two speeches to be made on a motion to lay on the table.

The President: If the Chair committed one error, it will try to avoid that same error hereafter. [Laughter.]

The motion to lay on the table was lost by a vote of 53 to 61. [Loud cries of ayes and noes! Let's adjourn for Oakland!]

Dr. Davis: I hope the Association will not entertain any dilatory motion to call the roll. Let us in five minutes finish this work one way or the other. It will neither kill nor cure anybody.

The amendment to the resolution was called for.

Dr. Storer: I ask the courtesy of the Chair for once, and I will state, with all respect to yourself, that in view of the argument on this floor yesterday, and the action that was had yesterday, that it would be a stultification of the action of this Association, including yourself, to pass this resolution, and I venture to say that you would not have been President of this Association if—

Dr. Gibbons: I call the gentleman to order.

Dr. Storer: I accept your call to order, Doctor. I say that this stultification might have taken place—and if it did take place, then that it would be a full stultification of this Association to take this action now, in the face of the former action of the Association.

Loud cries of "Question!" And while the vote on the amendment was being taken—

Dr. Toner: Is there a gentleman here who would be willing to consult with any one not recognized by the local or State Association?

The amendment was then put to vote, and lost by a vote of 41 to 45.

Surgeon Browne, U. S. N., moved the indefinite postponement of the resolution.

Dr. Davis: I must ask the members of the Association if they are willing to give falsity to our record of yesterday, in which we agreed to go on the excursion to Oakland this morning? We can finish this business just as well to-morrow as to-day. It is a question only of tweedle-dum and tweedle-dee.

Dr. Cole moved to adjourn till 8 o'clock P. M., which motion

was carried almost unanimously, and the members started for Oakland.

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EVENING SESSION.

Dr. Stille called the Association to order, at 8 o'clock Friday evening, and read the original resolution proposed by Dr. Atlee.

Dr. Storer, of Boston: Before a vote is taken, I desire to say a few words. And first I wish to repeat, in the most decided language, what I thought I said distinctly enough this morning; that my remarks with reference to the President of the Medical Association were without the slightest personal reference; that I entertain, and have always entertained for him, personally, the most profound respect. I supposed that this was distinctly understood by every man in the hall this morning, and by the President. I understand, however, that in regard to the last gentleman, I was wrong; and I now repeat my statement, and if that is not sufficient (if he thinks it is not sufficient) I now publicly and from my heart apologize to him and to you. [Applause.]

PERSONAL EXPERIENCE.

Dr. Atlee stated this morning that if this resolution was passed, it was all that was desired, because it was practically an endorsement, by this Association, of female physicians. This being the case, I would say a word or two in regard to points that I did not speak of yesterday, because I thought it was entirely unnecessary, and in this matter I speak from experience. There are other gentlemen present who have had similar experience to my own. It may be, however, that they do not care to state that experience as plainly as I think the importance of the question demands. I have thoroughly tried this experiment. I felt several years since that the question was of such importance, allied, as it was, more particularly to a branch of the profession to which I had devoted myself, that it was of sufficient importance to be looked into, not merely theoretically, not merely on the ground of the respect we have for woman, but in its relations to the community; and therefore, gentle-

men, for several years I occupied the position of a surgeon to a hospital at which there were women physicians, and for two years I had some association in private practice with one of the very best woman physicians, a graduate of the Female College, as I suppose there is at present in this country, and I will tell you distinctly, gentlemen, that by the best portion of the community, by the most refined, the most delicate ladies in the community, there is not that confidence in the woman physicians that there is in the men, in the matter of practice. I state this because it is claimed that there are certain branches of the practice filled by them, and for which they are peculiarly fitted; that on the other hand, the relations of the physician to his patient, and the relation of the patient to the physician entirely debar the idea of sex. In the case of confinement, what lady hesitates to send for a male accoucheur? In the case of a difficult confinement, provided she is attended by a midwife or nurse, what lady hesitates to have a male physician called in, if the anxieties of the case demand it? It is so, gentlemen, with regard to all other cases which are claimed to be the peculiar province of women. But, Mr. President, there is another point underlying all this. We will grant that some exceptional women are as interested in our science as ourselves. That some of them have those peculiar qualities, that especial temperament, that gives them not merely a taste for anatomy and surgery, but courage to face the greatest dangers and anxiety in surgery; that there are some women who are able to go out in inclement weather and brave the storm; we may grant that women, some of them, may have had peculiar means, or favorable opportunities, which allow them to get the same education that men have; we grant that, and grant it freely, that in some matters, intellectually, women are as completely mistresses of their subject as we are masters of ours; but beyond this there is a point that is fundamental to the whole matter, and out of very many physicians that have discussed the matter with me (I may say out of many of my patients who have discussed the matter) I have to see the first one that does not agree with me

in it; and that is this inherent quality in their sex, that uncertain equilibrium, that varying from month to month, according to the time of the month, in each woman, that unfits her from taking these responsibilities of judgment which, as I said this morning, are to control the question often of life and death. Women may be, and are undoubtedly the best nurses; they may carry out to the letter the direction of the physician; but every physician who is familiar with women, and every woman, almost without an exception, who expresses an honest opinion in this matter, will say that women from month to month and week to week vary, up and down; that they are not the same one time that they are another; that their diagnosis varies, and comparing the average of women with the average of men to-day, they are inferior in the matter of judgment.

BASE MOTIVES.

Now, I know there are many sides to this question. Dr. Thomas read to you a list of leading men in the profession who allow their names to be used as consulting physicians, or directors, or trustees of various educational establishments, and it is claimed that that use of their names is a guaranty that the system is endorsed. We, all of us, know that very many men are compelled to allow their names to be used, in the same way that they endorse Seltzer water and surgical instruments; and I have no doubt, from the statement made upon both sides of the question by one prominent gentleman in this assembly, that it is possible that his heart may direct him one way and his judgment another. I said this morning that I would not imply that any man of standing in the profession would be governed in his profession by pecuniary considerations, but it is evident that gentlemen who are practicing in a certain department, providing their organizations allow them to endorse female physicians, are thereby sure of an increase in their consulting fees.

There is one other argument, Mr. President, which has been used, and which has been printed and circulated throughout

the country, and it is a strange one in the portion of the country from which I come, and that is this. It has been stated here to-day by one of the most prominent champions of this movement, and that is that no male physician, no matter what his standing, can enter the chamber of a sick woman, no matter in what position, who is unmarried, without exciting in her mind delicate feelings. I hate to refer to this, but it is upon the record, and it is one of those base arguments which is used for the purpose of destroying an influence throughout the whole land.

AN HONEST CONVICTION.

Dr. Atlee: The gentleman says that I stated on the floor this morning that the American Association ought to endorse the female practitioner. I said no such thing. What I said was this, that by passing that resolution it would place me on the same footing precisely with my professional brethren throughout the United States, giving me the privilege of consulting with whom I pleased who was a physician, male or female, that lived up to the code of ethics, not that I endorsed either male or female physicians, but to give me my rights as a physician.

There is another matter, and that is the matter of pecuniary motives. That was alluded to this morning, and there has been allusions to it this afternoon. I deny the insinuation that has been made, and I hurl it back in the gentleman's teeth. I have no pecuniary interest in the matter, I occupy my position honestly, and I hope to retain that honest position till death. I conceive that females have rights, and these rights under the American code of ethics I will maintain as long as I can under the institutions to which I belong. If pecuniary considerations had governed me, why should I refuse consultation with them, when other gentlemen, under institutions that have the same laws, hold such consultations? I think that will disperse anything of that kind, and I hope the gentleman who has made that insinuation will apologize before the Association for it. Gentlemen who know me in Philadelphia and in Pennsylvania will not dare accuse me of such a thing.

PHILADELPHIA ENCOURAGES FEMALES.

With regard to the qualifications of females we agree to disagree. I have a right to my opinion as any gentleman has to his. I have met with females, as the gentleman I refer to has met with them, before these obnoxious laws were passed, and I felt elevated by such association, much more so I may say than I have with a majority, perhaps, of physicians of the male sex with whom I have associated. We have in the profession female physicians, and we cannot get rid of that fact, and they are encouraged largely by the community. I do not care what the public sentiment of Massachusetts may be; I know the public of Philadelphia does encourage females to the extent of $10,000 or $12,000 a year; and if women practitioners in Philadelphia or any other part of the country are inferior to men, why, we have nothing to fear. I do not charge any gentleman with a pecuniary motive in fearing that some woman will take away his practice, and yet, sometimes it looks to me very much as if some men were afraid of it. Now, sirs, humanity demands that we should have an opportunity of going in and aiding a female physician under difficulties, as much as a male physician. If she has a difficulty which she cannot manage why should she not have the same privilege of calling in one of more experience, as is done every day by younger physicians, who by that very act of calling in another physician to consult with them, acknowledge their inferiority? I say it is inhuman to consider anything but the qualifications of the practitioner, and I say it is violating the very spirit of our institution, which is to promote the progress of science, and in the spirit of humanity to carry out the code of ethics, which is broad and wide enough to cover the whole ground of that resolution. We should only be governed by that code in our communications with others; by that code, whether male or female, black or white, and by that alone.

APPEAL FOR HUMANITY SAKE.

Dr. Jones, of Ohio: I do not wish to occupy the time of this Association with words, but there is one argument that suggests

itself to me on this resolution, that I wish to advance, and I do not know how to get over it, and that is, that we are bound to consult with ladies for the sake of humanity itself. Suppose a patient sees fit to employ a lady, and the case is a peculiar one. The patient is brought under the influence of remedies, and the physician cannot tell what effect these remedies would have upon the patient. Then I say humanity demands that we should countenance this physician, even though to a certain extent she may be an irregular physician. If she is a lady and a graduate, under the code of ethics it does not seem to me wholly in keeping for a strong man to array himself as we appear to be trying to compel men to do against women, too strong for some of us, however, I am afraid, who oppose this resolution. This matter is one which will regulate itself. Here and elsewhere society regulates the grade of each and every man. You bring a man above his level in society and he will soon be brought down. If a man elevates himself above his position, he will be brought down very soon, and the whole matter will regulate itself. If it is beyond the scope of woman to grasp with disease, the world will soon find it out. If a lady has the intellectual ability to become a good physician, she is entitled to her inheritance, but that is not the ground upon which I make the appeal. It is in the name of humanity that I say this resolution ought to pass.

JOHNS HOPKINS UNIVERSITY LIBRARY

Dr. Gibbons, Sr., of San Francisco: We have a right sometimes to judge of a proposition by the arguments which are brought forward for its support, and if we are to judge of this proposition by the arguments brought forward by my friend from Boston, I think it would prove conclusively the weakness of his side of the question. One of his arguments was, that female physicians fluctuate in their judgment, in consequence of natural changes in their systems; that once a month their judgment was influenced by these natural changes. Now, I appeal to your observation, Mr. President, and that of any other medical man here, whether it is not a fact that any large majority of male practitioners fluctuate in their judgment not once a month with the moon, but every day, with the movement

of the sun—whether one-half of the male practitioners of medicine are not to a greater or less extent under the influence of alcohol at some period in the twenty-four hours? [Applause and hisses.] Gentlemen, we have an Academy of Sciences in which we place all specimens of strange animals, and if some one will catch me one of these hissing animals, I will be glad to present it to that Academy. [Hisses.] I was not aware that I was stating anything offensive, because I was stating a positive fact in regard to the habits of men. I do not pretend to say that men in the practice of medicine get drunk, by any means. [A voice: "Temperance lecture!" Hisses.] But what I do say is this, and I insist on the privilege, as I believe I have been misinterpreted, of correcting myself—what I mean to say is, that the great majority of the community, say three out of four, do make use of wine, or some kind of intoxicating drink, under the influence of which, without being drunk, their judgment is more or less affected, and I lay that down as a physiological fact in our society, and that is all I mean, when I refer to the changes that take place in the judgments of men. [Hisses.]

The President: Gentlemen, allow me to appeal to your good sense and courtesy against any such manifestation as this.

A delegate: I ask the Chair, then, to call any speaker to order who shall violate the rules of decorum by such a reflection.

A QUESTION OF TYRANNY.

Dr. Gibbons [proceeding]: Another position on the question taken by the gentleman from Boston is, that no physician can enter the chamber of a female without exciting delicate feelings. Now, I say no absurdity of that kind ought to be brought before this body on a question like this. All this argument is out of order upon the question before us. It is not a question as to whether females should be educated as physicians or not; the resolution pending has nothing to do at all with that, and one who may be opposed firmly, permanently and fixedly to the education of females as physicians, may still with propriety vote for this resolution. We have a code of ethics of the American

Medical Association extending over the whole country. That code of ethics has been interpreted by us, and it has been said on this floor that it undoubtedly gives the privilege to every man of consulting with females, or any one else, with that code; but in a certain portion of our country it is interpreted differently, as prohibiting members of the faculty from associating medically with women; and, not only that, but as prohibiting them from consultations with members of the profession who do consult with women, or members of the profession who teach women, or consult with physicians who do so. In Pennsylvania we are told that this is the rule, and there are some who dare not consult even with the President of this Society, lest they should come under the ban of this Society at home, in consequence of that interpretation of the code of ethics. Is it proper for this Association to permit such an interpretation of our code of ethics, working disorder in the profession, and setting its members by the ears? Is it proper for us to require our members to submit, as Dr. Atlee does, to the tyranny which prevents him from consulting with a female physician, and from consulting with any other member of the faculty who does? [Applause.] They must do that; or they must break loose from that code of ethics, or at least from the interpretation given to it by the Societies to which they may be attached, and set those Societies at defiance, daring them to enforce such a law. It is the worst possible position in which to place members of the profession. If we allow such loose interpretations of the code of ethics, I say it is preverted from its original design. In permitting members of the profession to be expelled for associating in consultation with female physicians we are not doing our duty. For these reasons I want the sanction of this Body, not only in Philadelphia, but elsewhere in the United States, by declaring that the code of ethics does not prohibit or prevent anything of the sort. I have consulted with female physicians on several occasions, and I am willing to do it again; and I have found them standing as high, in point of education and in moral standing, as myself or any other male member of

the profession; and when I find a respectable woman like that I will consult with her; and I hold it is the right and duty of every physician to do so. We should declare that right to exist in the State of Pennsylvania and all over the United States. Individuals come here from Pennsylvania and tell us that the right is there denied; and they ask us to pass this resolution, in order to relieve them from the difficulty, by declaring that the Pennsylvania Society shall give the same construction to the code of ethics as is given to it elsewhere. In conclusion, inasmuch as my first remarks seemed to give some offence, although I did not intend anything of the kind myself, I beg to apologize, and assure members of the profession that no man has a higher regard for every member of this Body than myself. I assure the members that my remarks must have been misunderstood in regard to intoxicating drinks; and therefore I apologize for those remarks and recall them. [Applause.]

COLLEGE OF PHYSICIANS VERSUS COUNTY SOCIETIES.

Dr. Stille, the President (Dr. Gibbons having been called to the chair): I am not going to make a speech, because I do not wish to detain you; but things have been said here in regard to the State which I, in part, represent that are not altogether correct. Some things have been said, evidently through inadvertency, and others through ignorance, both of which I wish to correct. A statement which has been made through inadvertence is, that the Society—by which is meant, I presume, the Medical Society—the Societies of Philadelphia have enacted a law forbidding their members to consult with female practitioners of medicine. Now, that is not a correct statement. The County Medical Society has passed resolutions of that sort. But there is another Society in Philadelphia, which has existed for more than a hundred years, and which is known to many of the members of this Body as the College of Physicians of Philadelphia, the oldest Society of the kind in the country, and which includes all that is eminent, all that is renowned, all that is useful in the medical profession, and excludes all that have not some decided professional claim to membership. Now, that

Body decided when this question was brought up differently from the County Medical Society. It turned it out of doors, and left everybody to do as seemed good in his conscience. So it should be understood that in Philadelphia it is only a particular Society—the County Medical Society—and not the College of Physicians of Philadelphia that has adopted such an illiberal course. I have the honor to be one of the members of that College of Physicians, and one of the censors of that Society, an office which I have held, if I remember rightly (after having the honor of being President) for eight or nine years, certainly for seven years. I am familiar, therefore, with all that has been done upon this question in the County Medical Society, because it was likely to come before the Board of Revision to which I refer; and not a single member of that Society has dared to test the question before the Board of Censors. They have passed in the Society a resolution condemning the consulting with female practitioners, and there they have stopped. If I may speak for myself, I will say they have known that I have done so, and others whose names, if I were to mention them, would be familiar to the ears of all of you, have consulted with female practitioners. Some of those gentlemen, when they found they were acting in opposition to the rules of the County Society, withdrew from its fellowship, and others did not hesitate to consult with female practitioners, and defied the Society to enforce its rule. I repeat that it is only the Philadelphia Medical Society which has adopted such a rule; and it is a question upon which the Board of Censors has never been called upon to pronounce.

IN A PREDICAMENT.

Dr. Atlee: I stand corrected in regard to the societies of Philadelphia. But I would ask of our worthy President whether the College of Physicians is represented in the State Medical Society.

Dr. Stille: No, sir.

Dr. Atlee: The County Society, and not the College of Physicians, then, is represented in the State Medical Society; as

the College of Physicians consists of the more respectable members, and a greater number of them than the County Society, it should be represented in preference. I believe that is the fact. And yet, this County Society being represented, the State Medical Society puts a ban upon any physician who consults with a female practitioner; while the College of Physicians, the most respectable body in Philadelphia, perhaps the most respectable in the United States, as the President tells us, leaves that matter to the code of ethics. The County Medical Society, the inferior body, so read the code of ethics as to prohibit any man from consulting with them. It is under this state of facts that we call upon this Body for relief. I am a member of both the County Society and the College of Physicians, and I feel that I am authorized to state that it is only by the action of the County Medical Society, an inferior organization, that we are placed in this predicament, from which we ask relief.

NON-INTERFERENCE COUNSELED.

Dr. Weatherly: The more I hear of this matter the more fully convinced I am that this Medical Association should pursue the same policy as heretofore—namely, not to interfere with local quarrels. [Applause.] Up to this time such matters have been referred back to the State or the county organization. If these gentlemen in Philadelphia, or in Pennsylvania, cannot manage their own quarrels, they should not bring them here. We have heard the whole subject discussed, and I think the general opinion is that we do not violate the code of ethics in consulting with female practitioners; but we should leave them to settle their own local quarrels; and I therefore move that this resolution be indefinitely postponed.

The motion to indefinitely postpone was carried by a very decisive vote.

NOTE.—All will agree that there is in this debate much that is not stupendously valuable; much that is childish; much that reads like an extract from the life of Helmbold; much that is disreputable; but as a debate on a question important both in this country and Europe, these sentiments delivered in the highest representative Medical Body in America are historical, and are worthy of a permanent record.—ED.

# ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

## ART. I.—THE MEDICAL PROFESSION AND LIFE INSURANCE.

Life insurance has of late years developed itself in this country to so large an extent, and the medical profession is so intimately concerned with its operations, that we have thought it worth while to make some inquiries, having for their object to ascertain approximately the degree in which the profession is beneficently interested in the matter. The number of transactions taking place every year between the insurance offices and the public in the way of proposals for life policies must be enormous; and when it is remembered that to every such negotiation a medical man is a necessary party, and that its results is mainly determined by his opinion, the question naturally arises, how far business of this kind operates for the benefit, commercially speaking, of the profession. Obviously, a full and satisfactory answer could only be given after an investigation such as we are not for the moment prepared to undertake. Different offices have different methods of obtaining the medical reports which they require, and medical reporters are remunerated upon different principles by the offices. All that we have been able to do at present has been to inquire of the several life offices as to the amount paid by them to medical men in connection with life policies during the last year, and the following table contains as much information upon the subject as we have thus far elicited. Many of the offices have not yet replied to our inquiry; some of them probably are waiting to make up their accounts. To those gentlemen connected with the undermentioned offices who so promptly and obligingly responded to our request, we offer best thanks.

This paragraph shows in all cases the amount paid in a single year by each of the offices:

Albion, 1870, £282; Alliance, 1869, £221; Briton, 1870, £2856; Clerical, Medical, and General, 1869–70, £666; Clergy Mutual, 1869–70, £409; Crown, 1870, £801;* Eagle, 1869–70, £766; Economic, Average, £275; Emperor, 1869–70, £304; Equity and Law, 1869, £271; European, 1869, 2859; Guardian, 1870, £141;† Hand-in-Hand, 1870, £236; Law Union, 1869–70, £444; Legal and General, 1869, 139;‡ London and Lancashire, 1869, £608; London and Provincial, 1870, £286;‖ Masonic, 1870, £197; Metropolitan, 1870, £546; National, 1870, £280; National Provident, 1869–70, £855; Northern, 1869, £1243; Planet, 1869–70, £327; Provident, 1870, £1078;§ Provincial, 1869–70, £330; Prudential, 1870, £1277; Sceptre, 1870, £353; Scottish Amicable, 1870, £985; Sovereign, 1870, £407; Westminster and General, 1869, £207; Whittington, 1870, £575. Total, £20,224.

It thus appears that thirty-one insurance offices have paid during one year the large sum of £20,000 in fees to medical men for their reports in connection with life policies. How many life offices there may be altogether in the country we do not know, but the total number is far greater than we have received information from, and the amount paid altogeter in medical fees must consequently be far in excess of what is stated above.

We hope to revert to this matter on a future occasion, and shall in the meantime be obliged to any of our readers who will inform us of the scale of medical fees paid by any life office with which they may be connected.—*Lancet.*

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* Exclusive of salaries to medical officers at head offices and branches.

† Exclusive of salary to Society's physician.

‡ Excluding salaries.

‖ Including honorarium to Society's medical officer.

§ Out of this sum £678 was paid in fees to medical men, the remainder in salaries.

NOTE.—In furtherance of this undertaking on the part of the "Lancet," the associate Editor of this Journal will endeavor, without delay, to gain the requisite information from each Life Assurance Company in America in relation to the amount and nature of fees paid to medical officers. Subscribers and "exchanges" will please be prompt in giving their assistance, in order that a complete list may be published at an early day.—J. M. H.

ART. II.—SULPHATE OF QUININE IN OBSTETRIC PRACTICE.

Dr. Monteverdi considers (*Nuova Lig. Med.* No. 4, 1870, that he has discovered new properties in this salt. According to the author, it acts not only as a general tonic, but also directly on the uterus, causing contractions which lead to the expulsion of fœtus and placenta. In this respect the quinine is thought greatly superior to ergot, as it does not, like the latter, act injuriously on the fœtus; nor is this all, as the quinine may be used in cases of narrow pelvis, undilated os uteri, and before the escape of the amniotic fluid. It may also be given in the hæmorrhage occurring in pregnant women, in amenorrhœa depending on a torpid state of the uterus, and in puerperal fever.

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ART. III.—THE MANAGEMENT OF THE PLACENTA.

Dr. Chantreuil has inserted an essay in the "Archiv. de Med." (October, November, and December, 1870), which he entitles "Uterine Expression." We are all acquainted with Dr. Hicks's plan of combined external and internal manipulations in certain stages of parturition; here, however, we are advised to compress the fundus of the uterus steadily after the expulsion of the fœtus, so as in some degree to express the placenta, as a cherry-stone is expressed from the fruit. The essay of the author is extremely well written, and his quotations prove his reading to be very extensive. He points out the dangers of pulling upon the cord, and the risk the mother runs when the hand is introduced into the uterine cavity. But he does not allow sufficient importance to the spontaneous extrusion. Dr. Chantreuil reminds his readers that R. Wallace Johnson, in 1769, recommended a pressure of the same kind, combined with some traction of the cord. But Prof. Crede, of Leipsig, is the first who advised the proctice in all cases. Dr. Chantreuil has collected no less than 540 cases in which uterine expression has been used by himself, and found that the placenta

came away 32 times immediately after parturition; 78 times one minute afterwards; 175 times in two minutes; 109 times in three minutes; 50 times in four minutes; 47 times in five minutes; 20 times in seven minutes; 4 times in eight minutes; 11 times in ten minutes; 3 times in twenty minutes; and once in twenty-five minutes.

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## Art. IV.—Operations by Students.

The examiners and teachers of the rising generation of surgeons have lately become awake to the strange inconsistency of its not having been necessary for candidates for surgical diplomas to prove themselves surgeons in fact. Of the vast numbers of men who have up to the present time withdrawn from hospital training into private practice, the majority had not even undergone a complete course of instruction in operative surgery on the dead body, and comparatively few ever used the knife for any other purpose than dissection until the health and lives of patients began to depend as much on their coolness of judgment and skill of hand as on their theoretic knowledge.

We therefore note with much satisfaction an incident of some novelty which is mentioned in one of our hospital reports of this week as having occurred in the operating theatre of one of the principal London hospitals—namely, the performance of an operation by a dresser in the presence of his fellow-students, and under the immediate eye of his teacher. We understand that it is the intention of this gentleman to accord to those of his dressers whose diligence and skill merit recognition the privilege and skill of performing, during their term of office, a few simple operations in the hospital theatre, and have little doubt that this liberal experiment will prove to be not only a great incentive to diligent and careful study, but the best possible means of cultivating those qualities which are peculiarily necessary to the composition of a good surgeon.—*Lancet.*

# CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

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LESSONS FROM THE MEDICAL CLINIC AT THE "HOPITAL DE LA CHARITE," given by S. JACCOUD, Assistant Professor to the Faculty of Medicine at Paris; Physician to the Hospital St. Louis; Chevalier of the Legion of Honor; Corresponding Member of the Royal Academy of Science of Lisbon, and of the Medical Societies of Berlin, Vienna, Wurzburg, etc. Containing twenty-nine wood cuts and eleven chromo-lithographs. [Translated by Dr. J. D. JACKSON, of Danville, Ky.]

## FOURTEENTH LECTURE—PROGRESSIVE NERVOUS ATROPHY.

History of a Paralysis Disseminated Throughout the Four Limbs—Paralysis of Muscular Groups According to the Distribution of the Nervous Cords—Importance of this Mode of Localization—State of the Reflex-Motility; of the Electrical Contractility—State of the Sensibility.

Gentlemen,—Clinical teaching ought not to be confined to the study of rare cases, but when a case presents itself to us with its characteristics so precise and complete as of itself to suffice for the establishment of the existence of a malady still badly defined, and to give us a knowledge of the symptomatic phenomena of it, then it would be a fault to pass by this favorable occasion without drawing profit from it, and indeed the very rarity of analogous cases ought to be a motive the more for profoundly studying that which chance has presented to our observation. These reflections have been inspired by the old man occupying St. Charles' Ward, No. 11; he is affected by a rare disease of the nervous system; this disease, scarcely known as to its clinical character, is still more obscure as to its anatomical seat; it behooves us, then, to look attentively at the typical case which we have before our eyes.

We have here a man of seventy years of age, a watchmaker by trade, who has been in our service for two weeks and a half;

the first touches of his malady came upon him six weeks before his entrance into hospital; the debut of his troubles can, then, be accurately fixed at eight weeks and a half. Here is what has taken place. Naturally of a poor constitution, this individual has, nevertheless, all his life enjoyed excellent health; of a lively disposition, alert at his work, he was fond of a morning and evening of taking long walks, in order to compensate for the excessive confinement imposed by his profession. A little more than eight weeks ago, after returning from a walk of many hours, he, for the first time, experienced a numbness and some pains in his feet, hands, legs, and forearms; these pains were dull and continuous, they never presented themselves in a lancinating form, and they always remained limited to the points indicated. During the first days these phenomena were not continuous; a night's rest was sufficient to dissipate them, and the man renewed his daily work. A little later, and these pains disappeared, but they were replaced by an unusual clumsiness in his daily work. This workman, whom a long practice had rendered skillful, finds himself with difficulty accomplishing the delicate manipulations of his trade, then he reaches a point at which he finds that he spoils many of the pieces he has in his hands, and vanquished by necessity, he renounces his work without being otherwise sick. This was towards the end of the third week. Eight days later, it was not only pain and inaptitude which he experienced in his upper limbs, but there was a true powerlessness, the movements of the hands and feet were abolished. Another week passed, and walking is no longer possible; the troubles of motility in the lower limbs have increased so rapidly that, three or four days after having lost the faculty of walking, the patient can no longer sustain himself upon his limbs. Then alone does he take to his bed; this was at the commencement of the sixth week; this man, who is very intelligent, it is scarcely necessary to say, was profoundly afflicted with this state of powerlessness, but it was not the less surprising to him that he experienced no other accident than the increasing disorder of motility; upon this point he

affirms, categorically, that in proportion as he lost the motion of a part of one of the limbs, that the part fell away, and became deformed with an extreme rapidity. In the middle of the sixth week a new phenomenon arises, this is a complete fall of the right wrist; three days later (the 4th of July) the patient has entered hospital.

He is, indeed, profoundly emaciated, but this emaciation, or rather this false emaciation, like that which we have studied as appertaining to muscular atrophy, is neither uniform nor general. Certain regions are shrunken, and consequently deformed; besides these, there are others which have preserved their form and their natural volume; on the other hand, the shrunken parts are the only ones which have lost their motility, the movements persisting in the others; it is necessary then, before everything else, that we should be perfectly fixed in mind regarding the seat and extent of the deformities—that is to say, the atrophies.

In the upper limbs they are confined to the forearms and the hands, but they do not occupy homologous points on the two sides. In the right forearm there is no trace of the normal projection or rotundity formed by the external group of the radials and supinators; the posterior face of this segment of the limb is completely flattened; one being able to press the fingers deeply into the radio-cubital space; on the hand the interrosseous spaces are normal, but the complete shrinking of the thenar eminence contrasts in the strongest way with the salient rotundity preserved by the hypothenar. On the left the shoulder and the arm are intact, as on the right; on the forearm it is the salient anterior portion which has disappeared; to the outside and posteriorly, the muscular reliefs are normal; on the hand the thenar eminence is of satisfactory volume; it is the salient hypothenar which is flattened down, and the interrosseous spaces show themselves hollowed.

In the lower limbs the atrophied condition is similar on the two sides; the muscular reliefs of the limb and of the foot have entirely disappeared; in the region of the calf of the leg

particularly, the skin forms a great flabby pocket, empty by the loss of the gastrocnemials. No disorder seems to exist in the thighs, however; the relief of the adductors is less marked on the left than the right. Despite the extent and the degree of these deformities, there is no other vicious attitude than the drop of the right wrist, of which I have already spoken; but it is also as complete as possible, the hand being appended to the forearm, like an inert mass, and the digital extremities supple and lightly flexed; arm almost in contact with the anterior antitracheal region; imagine that upon a cadaver not yet rigid, you have cut the extensor tendons entire, the fall of the wrist you would thus obtain would not be more pronounced than that which exists in this patient.

I have already told you that the motorial powerlessness is not more uniform than the atrophy, and that it is distributed like it; the phenomena of *akinesia* are thus disseminated, and to seize them in their totality, for appreciating exactly the seat it is necessary to have recourse to a rigorous and patient analysis. The necessity is the same (never forget it) whenever the disorders of movement are not affected by the regular distribution of one of the common forms of paralysis; it is only by a severe analysis that you will come then to locate precisely the extent and the sphere of the akinesia, after which you can rely with confidence upon these first contributions in searching out the signification of these phenomena and the seat of the cause giving them origin. The study of the diverse normal movements shows us clearly which are the ones abolished, and which are the ones remaining; but be on your guard in adhereing to the first order of teaching; the propositions which they express are, necessarily, numerous and confused, and the conclusion which they contain does not disengage itself with sufficient clearness. It follows, therefore, that you should advance two successive steps in your consideration of the question, transforming the complex results of analysis into a rigorous synthesis, and for doing this you have only to resolve the two subjoined anatomical equations; from a knowledge of the abolished

movements deduce the conception of the muscles which have become impotent; that is the first step, or the first equation. From a knowledge of the powerless muscles, deduce the idea of the nerves affected; this second and last step conducts you to a synthetical conclusion which contrasts happily by its clearness with the diffuse results of the initial analysis. An examination of the troubles of motility in our patient goes to show you, in all its plainness, the importance and the utility of this method, which I cannot too much recommend to you.

On each side the motions of the shoulder and the arms are preserved, from whence results this singular condition; that the patient can elevate and carry to his head his forearm, and his completely inert hand, the inferior segment of the member possibly following the elevation of the arm, the motility of which, I repeat it, is possible on the right and on the left. In the right forearm the movements of extension and supination are totally abolished, there is not a vestige remaining, the fall of the wrist in complete pronation can be foreseen. The flexion of the fingers seems likewise lost; but a more attentive examination demonstrates that there is room for a distinction, which has all the precision of a physiological dissection, and is of a considerable interest. This is what occurs on efforts at flexion; when the forearm and the hand being sustained in a position intermediate between pronation and supination, or in complete supination, and the patient is commanded to close his hand, the thumb, the index and middle fingers remain immobile despite an energetic excitation of the will; but the fourth and fifth fingers flex themselves; this flexion commences by the articulation of the third phalanx with the second, and it is carried up to a contact of the point of the ring-finger with the palm of the hand; voluntary flexion of the hand upon the forearm only takes place in the inner half of the wrist, it is not direct, it is accompanied by a very marked adduction of the cubital border of the hand. The movements of separation and approximation of the fingers are abolished, save in the first interrosseous space the isolated movements of the little finger are good, but

the extension, the flexion, and abduction of the thumb are impossible.

Here are certainly very complex disorders, phenomena very contradictory, and in these terms it appears scarcely possible to deduce any precise conclusion; but for the conception of the functional troubles, substitute that of the affected muscles, and this first transformation will conduct you to significant propositions; the results of this minute analysis can, in effect, be thus expressed; in the upper limb, of which the muscles of the shoulder and the arm are sound, all the muscles of the posterior region and the external region of the forearm are inert; it is also the case with those of the anterior region, with the exception of the anterior cubital, and the internal half of the deep flexor; on the hand the thenar muscles are inactive, as are the interosseous of the three last spaces; the adductor of the thumb, the first dorsal interosseous, and the hypothenar muscles have preserved their motility. Observe all this well; but do not stop here; arriving at our second anatomical equation, grouping these disorders of muscles according to the distribution of the nerves animating them, and we obtain a synthetical formula of valuable preciseness; on the forearm and the hand all the muscles suppled by the median are inert; the muscles innervated by the cubital have preserved their motility with the exception of the interosseous of the three last spaces.

Let us pass on to the left upper limb. The movements of extension and of supination are entirely normal, the flexion is not totally abolished, but it is compromised; it is null in the articulations of the third with the second phalanges, light in the superior articulations, perceptible in the metacarpo-phalanges, and a little less marked at the level of the wrist. When the patient obeys the orders given him, employs all the energy of his will to produce a complete flexion, which, in reality, is scarcely accomplished, one observes a singular phenomenon, this is an energetic contraction of the biceps and the anterior brachial; the useful effect of the voluntary excitation of the flexor muscles of the hand and wrist cannot be obtained, it

seems that the motional impulse is concentrated in those muscles which are animated by another nerve, but which are also flexors. The movement of pronation is lost, as in the flexion and adduction of the thumb. The separation and approximation of the fingers is very limited, but not null; finally the flexion of the internal border of the hand and the movements of the little finger are no longer possible. That is to say, that the extensors, the supinators, and the external radials, have preserved their action, that the anterior cubital, the profound flexor and the hypothenar muscles have lost their force, that the interosseous are touched without being completely inert, that the superficial flexor is in the same condition, and that the pronators and the thenar muscles no longer have motility. In other terms, all the muscles animated by the median are inert, save the superficial flexor, which is very much compromised; the muscles innervated by the cubital are inactive, save the interosseous.

In the lower limbs the analysis conducts to results less complex, because the conditions are identically the same on the two sides. The movements of the thigh upon the pelvis, and of the leg upon the thigh, are all preserved, the movements peculiar to the leg, and of the foot upon the leg, are all abolished; hence the conclusion, unweakened by any reservation; all the muscular sphere of the sciatic nerve, and of the crural nerve, possess their normal motility, all the muscles animated by the sciatic external popliteal, and by the sciatic internal popliteal, are struck with inertia. In this condition the patient can lift up the lower limb a little bit, in extending it in a right line, upon the surface of the bed, but scarcely does this elevation commence being accomplished by the contraction of the triceps curalis than the leg falls down like an inert mass, because of the defective action of the muscles and the movement of rectilinear elevation, abruptly transforms itself into a limited movement of flexion of the thigh upon the pelvis; the heel passively follows this ascension until the flexion of the knee reaching its maximum, the posterior face of the limb, comes in contact with

the posterior face of the thigh. When things are thus, the patient can no longer deploy his limb, and stretch the thigh upon the pelvis, the limb opposes itself to this movement, as if there were a rigid, foreign body interposed between the inferior extremity of the flexed thigh and the bed; it is then necessary that another person should take the limb, stretch out and replace the member in the rectilinear position. The limbs deprived of motility have thus become an obstacle to the accomplishment of the movements of the thigh, since they offer the resistance of inertia, but these movements, viewed in themselves, are perfectly normal.

Once in possession of these precise disclosures touching the voluntary movement, we have interrogated the reflex motility and the electrical contractility. I would attract all your attention to this part of the clinical investigation, the results, in a diagnostic point of view, are of an equal importance.

The reflex movements are completely null; whatever may have been the excitation to which I may have had recourse, it has been impossible for me to provoke any appreciable phenomena in the inert segments of the limbs; on the other hand an excitation of the inner border of the axilla by tickling, has brought about severe contractions of the muscles of the shoulder and neck, and an excitation of the scrotum has been followed by reflex movements in the mass of the adductors of the right thigh.

As for the electrical exploration, which I have practiced many times in order to be certain of the constancy of the phenomena, the results are of the clearest character; the contractility is perfect in all the muscles which have preserved their motility; it is abolished or diminished in the inert muscles. The results are the same, whether one applies the current to the muscles, or makes use of nervo-muscular electrization; for the last mode of exploration the process is of the simplest. We obtain the nervo-muscular current in applying one of the poles of the apparatus upon a nervous cord, and the other upon the muscles animated by this nerve. In certain cases the results

furnished by these two processes are not identical, but in our patient they are the same. Thus, the current from the popliteal to the muscles which it animates, does not give any more contraction than the electrization of the muscles themselves; but the current established from the crural nerve to its muscles, furnishes contractions as rapid and as strong as the direct electrization of the sartorius muscle or the triceps; it is the same for all those nerves, the superficial tract of which permits the employment of the nervo-muscular current. So the inert muscles have their electrical contractility diminished or abolished—observe the fact. Remember, however, that those muscles are the only ones which may be atrophied, and you will see that these muscles affected, present three considerable phenomena: abolition of voluntary movement, abolition of reflex movement, abolition or diminution of elec-trocontractility.

The sensibility presents very interesting alterations in regard to their localization. They only occupy the fingers and the toes, and do not go beyond their roots a millimetre. At the place of their existence, the tactile sensibility and the sensibility to pain are equally abolished, that is to say that there are at the same time anæsthesia and analgesia; at these points the sensibility to temperature is also lost; here is the exact seat of these disorders. On the right hand the sensibility is null upon the dorsal face of the thumb, on the index and the external half of the middle finger; it is good upon the internal half of this finger, the ring finger, and the little finger; the palmar surface of the thumb, the index, the middle, and the external half of the ring finger are insensible; the other half of the ring and little fingers are intact. So the sensibility is abolished in the fingers of the right hand in the sphere of the radial and median nerves; the disorders are then localized, as are those of movement; but I repeat it, they do not go up beyond the roots of the fingers. On the left the sensibility is not preserved, except in the sphere of the radial, that is to say, upon the dorsal face of the thumb, the index, and the external half of the middle finger. Nothing could be plainer than this

pathological demonstration of the diverse origins of the collateral nerves of the fingers. In the toes the sensibility is null everywhere, save at the plantar surface of the great toe, but, to speak generally, the abolition is less absolute on the left than the right. Finally, the loss of electrical sensibility is localized like the anæsthesia.

At the next lecture we will show you how to make the differential diagnosis between this disseminated paralysis and muscular atrophy, and will give many other elements of practical value in this interesting disease.

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## PROCEEDINGS OF SOCIETIES.

**"Etsi non prosunt singula, juncta juvant."**

### Medical Association of the State of Alabama.

*Mr. President and Gentlemen of the Medical Association of the State of Alabama:*

The question of free medical education being one of great importance to us and the profession at large, and feeling that this Association was called upon to give an expression of sentiment upon this subject, on account of the attitude of the Medical College of Alabama, whose Faculty are honored and popular members of this organization, and which is entitled to representation in our midst, I have prepared, and herewith submit for your consideration, a report, based upon one I formerly made to the Selma Medical Society, and which is intended to

Note.—Proceedings of the late meeting of this Association not received in time. This paper was offered by its author as a part of the Proceedings, but inasmuch as it reflected upon the course of the Mobile Medical College Faculty, he was not allowed to read it. See his letter in "Correspondence."—Ed.

bring more fully before us the arguments involved, in order to enable us to arrive at intelligent conclusions; and also, I may say, to elicit full discussion of this "vexed question," medical education. Permit me to premise that I am actuated by no feelings of hostility towards this College, nor am I in the interest of any partisan clique. It becomes us calmly and dispassionately, to consider the attitude and effect of this movement. I will quote freely from the reports of others, giving them due credit therefore, as their ideas are pertinent and clothed in good language.

I consider the movement on the part of the Faculty of the Mobile School, as one of questionable policy and doubtful ethical propriety. I have much respect for this Faculty; individually and collectively; socially and intellectually, they are the peers of us all. But none will dispute my right to criticise their public actions, or to courteously express logical conclusions adverse to their professional policy. This movement is one that vitally concerns the profession at large, and should, as it does to-day, claim our earnest and serious attention. It will not do for us to close our eyes and amiably "pretermit it." The question which forces itself upon us is, do we endorse any action similar to that of this Medical College? Is it right or wrong? If right, we may support it; if wrong, as honest men, and men having at heart the good of the profession, we *must* condemn it. The subject of medical education has engaged the thoughtful and earnest attention of the American Medical Association from its beginning—in fact *this Organization had its foundation and origin in the necessity for reform in this direction.* At every session, able, calm and learned reports were prepared for more than twenty years, all looking to the elevation of the requirements necessary to graduation, and making the access to the doctorate more difficult and the title more honorable. It has been found that these means were inadequate to control the Medical Colleges. After all, the avenues to the medical diploma remain loosely open, and the step from the horse-jockey to the professional title grows still

shorter. The subject of fees as a part of the defective plan of the medical educational system of America, "had never engaged the formal attention of the Association until 1868." In New Orleans in 1869, at the first meeting on Southern soil after the war, "the question was brought directly and formally before the Association in two distinct forms. First, in the regular annual report on medical education, by Dr. Reeve, and again in the series of resolutions offered by Dr. E. S. Gaillard." I cannot do better than to quote from the report of Dr. Reeve, on pages 148 and 149 of the Transactions of the American Medical Association for 1869.

"The rivalry of the schools, so frequently the subject of animadversion by preceding committees, and to which so many of the evils connected with medical instruction have been attributed, has produced nothing we believe so injurious to the character and standing of the profession, nothing so disgraceful as this. It is a spectacle unfortunately very frequently presented within five or six years past, and has in some instances been even carried to the *giving away* of the lecture tickets. Against a course of proceeding so derogatory to the honor of the profession, so certainly exerting an injurious influence upon the young men who are entering it, *we feel compelled to protest.* The code of ethics clearly makes it a point of honor in individuals to conform to the general rate of charges for professional services of the district in which they reside; and although in this country we have entirely abandoned the "honorarium" of mediæval times, it is we believe, everywhere deemed ungentlemanly and dishonorable to obtain business by lowering the rates of compensation demanded. This being the rule of ethics for individuals, we can see no reason why it should not be so, but many strong ones why it should rather be more so for institutions; *we know of no code, written or unwritten, by which six or seven men can do with honor what one can only do with dishonor.* * * * * We cannot but look upon this as extremely unfortunate. Where an institution pursuing this course is located in the immediate neighborhood of others, it gives ground for suspicion of the dishonorable motives we have just denounced, and in any and every instance it exerts a decidedly injurious influence upon medical education and upon the profession. It is not according to human nature to furnish for almost nothing an article which is really valuable,

and which cannot be obtained elsewhere for less than five or six times as much. So palpable is this that it cannot be overlooked, and no amount of special pleading would convince an individual of ordinary intelligence but that if the price of an article be placed exceedingly below its known value, there must be a corresponding deterioration in its quality. Again, extremely low fees for medical instruction act injuriously upon the profession, by operating as a bid to men of few attainments and low character to enter it. In proportion as the facilities for entering a profession are increased, those unprepared by education, by culture, by association or by intellectual pursuits, are encouraged to aspire to it. Attracted by higher social position or by the hope of leading a more indolent life, youug men abandon other callings in life and undertake solemn responsibilities, for which they begin too late to properly fit themselves. The effect is obvious and has been well stated by one of the most eminent of our brethren."

"Every ignorant man admitted into our profession," says Dr. Geo. E. Paget, of London, "has an injurious influence on the estimation in which the entire body is held. *His* demerits have a tendency to lower *us* throughout the circle in which he is known. The want of confidence in him—the want of respect for him—begets distrust and disrespect for the profession in general."

The resolution of Dr. Gaillard, which is as follows—"*Resolved*, That the adoption of a uniform rate of collegiate fees, one hundred and twenty dollars being the minimum, be accepted as the sentiment and desire of this Association"—was adopted unanimously as expressive of the sense of the large and imposing meeting of representative physicians at the meeting in New Orleans, above referred to. At the meeting of the Association last year in Washington city, it practically undid what had already been done by it upon this subject, and remanded the matter once again to the Faculties of the various medical colleges. The question is thus still *sub lite*, and is open for discussion. It has many sides, and gentlemen may *amicably* differ about it; adverse or opposing views do not necessarily imply personal enmity or partisan zeal. I feel called upon to oppose the free-school system for these two, among many other reasons, "thus plainly and forcibly presented, first, that small fees

are not likely to induce really able men to devote themselves to the business of teaching; and secondly, that such fees will surely tempt inferior and poorly qualified young men to seek admittance into the profession in such numbers as to sink its rewards so low that it would not be worth any man's while to educate his son to the medical profession at his own expense." "The dogma that medical students are entited to free or cheap medical education involves almost of necessity the admission of their right to rapid and easy obtaining of the medical diploma."

Thus we have taken a hasty general view of the subject of free medical colleges. It would appear that the movement is impolitic, unethical, and of bad social and professional effects. Instead of leveling the barriers to the profession, we should elevate them; instead of *inviting* the masses to come up and be doctors without price, without education, and without labor, we should rather repel them, and demand that our numbers, which, according to the last census, now aggregate 74,000, shall be only increased by the addition of those who appreciate the privilege by having paid dearly for it. Without a good preliminary education, the young graduate would not be in unison with the men of science of the day; for, as has been well remarked by Dr. Baldwin, in his address before the Medical Association in New Orleans, "the methods of thought now developed among the thinkers of every science are *educated methods*."

As pertinent to the subject, I quote from the "Report of the Mobile Medical Society, to whom were referred the communications of the Societies of Merriwether and Montgomery. Says this report: "For the rest there does not seem to be any such relation between college charges and the standard of education as that which, in these communications, is so strongly asserted. Many of the higher institutions of learning, both literary and professional, both in this country and in Europe, are free to all who choose to make use of their advantages. This is notably the case in the great medical colleges of Continental Europe, where students pay nothing for tickets, and the

salaries of the professors are merely nominal, so small that in many cases they are not drawn at all." Among other points suggested by this paragraph, are these two. First, that medical colleges should be put upon the same footing with the public academic institutions of the country; and second, that there is such an analogy or parallelism between these free medical schools in the United States, that they deserve to be compared with those medical educational institutions of Europe which are herein spoken of as free-ticket schools. Both of these deductions contain fallacious propositions.

As to the first, while I endorse the propriety of giving the masses freely the elements of a common school education, or even more, yet it is certainly very doubtful in my mind whether or not it is judicious or consistent with sound economy to make every man and woman a doctor; or to give them that little professional learning which we see so officiously illustrated among our old women and itinerant quacks, "as a dangerous thing." It is to me self-evident that medical colleges should not be classed with the public schools, the free literary institutions. The second proposition is intended to convey the idea that the great institutions of Europe are free schools.

The attendance upon the lectures of these schools, it is true, is free, and this is the only point of resemblance, unfortunately, between them and their unworthy imitators in America. Let us examine briefly into these so-called free schools of Europe. Dr. Baldwin says: "Though the systems in Europe differ somewhat in details, they yet have a marked uniformity as to the measure of attainments necessary for a degree. All these systems have, more or less, the cardinal idea of a professional education, which is two-fold. First, the preliminary culture requisite to form a gentleman, and secondly, the specific culture branching out from that, and directed to a definite object. * * * * The French nation, perhaps, presents a fair type of the educational demands of the European schools. Before a student can matriculate in a medical university of France, he must present his diploma of "Bachelor of Letters"; and pre-

vious to graduation he must show his diploma of "Bachelor of Sciences," equal to the degree of A. B. in the colleges of this country. * * * In the medical department of the University of Paris there are twenty-eight professors and twenty-nine assistant professors, besides a dean; while in the University of Berlin, there are twenty-eight professors and thirty-eight assistant professors." How strong is the contrast thus briefly drawn between these so-called free schools of Europe and their feeble imitators in the United States of America. Are we to imitate the continental schools only in their worst and lowest features? But are these European universities really to be classed as free schools?

Dr. R. Good, in the May number (1870) of the "Richmond and Louisville Medical Journal," gives a very interesting letter from Paris, in which he enters somewhat extensively into the cost and mode of management of that school. He says, on p. 600, "If we now sum up the whole expenses, we find—

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| "1st. The two Bachelor diplomas - - - | 150 fr. |
| "2d. Sixteen inscriptions at 30 francs - - | 480 fr. |
| "3d. Four years dissection at 20 francs - - | 80 fr. |
| "4th. Three fin d'annee examinations at 30 francs | 90 fr. |
| "5th. Five doctorat examinations at 90 francs - | 450 fr. |
| "6th. Examination of thesis, including diploma, | 240 fr. |
| "7th. Average cost of thesis - - - - | 400 fr. |
| "8th. Fee for doctor's gown - - - - | 10 fr. |
| Total as above - - - - - | 1,900 fr., |

which is equal to $380 in gold. Five years may be looked upon as the average period for finishing; but few get through earlier, many are six or seven years."

In the February number of the "Richmond and Louisville Medical Journal" for 1871, p. 244, there is the following editorial statement: "To take the full degree in Vienna costs not less than 1100 guilders, or a little over $500. In Berlin the full degree is obtained at a cost of at least 350 thalers, or a little over $250. All know how very expensive the degree

of M. D. is in London, Edinburgh, and Dublin." Does this look like free schools? All these charges, you will remember, are made in countries where living is much cheaper than in the United States. Nineteen hundred francs and five or six years hard study, with fine literary attainments, before you can attain the title of M. D. P.

A most remarkable statement is contained in this report of the Mobile Medical Society, to wit, that the management of medical institutions is a "question over which the medical profession have no jurisdiction." The proposition contained herein is too enormous to need refutation. There are grave objections to State endowments also; not the least of which, in Alabama at present, is that it is impracticable. What are the arguments, on the other hand, in favor of free medical schools? "The only arguments we have seen advanced in favor of placing the fees for lectures at the very lowest figures, are that, thereby, poor and worthy men are induced to enter the profession, and that some of the brightest ornaments of our profession come from the lowest ranks of life. Both are specious; to make the first good, it should be shown that the graduates of such schools are more worthy than those of others; or that a greater proportion of them achieve distinction in after-life. As to the second, we believe if the testimony of the self-made men of our own or any other profession were taken, no one would scout more heartily than they the suggestion, that if the difficulties of their course had been increased, their progress would have been thereby stopped."

Even in the case of abundant endowments and strict examinations, free-lecture schools are objectionable, because "they exert an unfavorable influence by keeping down the rates in neighboring institutions not so fortunate, and thereby favoring the influx, through other channels, of unworthy and unprepared men."

Thus, gentlemen, I have presented a condensed review of the subject before us. I have endeavored to express to you why I feel called upon to oppose, and why I think this Association

should firmly and decidedly oppose the erection in our midst of a free medical college. I have endeavored to treat the subject in the abstract and in general terms.

Respectfully submitted,

BENJ. H. RIGGS, M. D.

Selma, Ala., March 8, 1871.

## ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

NEW YORK, 1871.

*Dr. Gaillard:*

At one of its recent meetings, I brought before the New York Obstetrical Society a typical case of metrorrhagia, caused by "fungous degeneration" of the lining membrane of the body of the uterus. The case presents several points of interest to me, both in pathological and practical points of view, but not feeling at this moment at all in the humor of writing an elaborate monograph, I give you what I have to say in the form of a rambling letter, without having any definite idea of the ground I shall travel over. The subject of metrorrhagia involves various pathological conditions of the uterus, and its ramification if followed out, would easily swell my letter into a volume.

When called to a case of chronic metrorrhagia, the first step is to get at the cause of the bleeding—to make a diagnosis. We begin by examining the cervix uteri, to ascertain whether there be any malignant disease, any simple ulceration, any polypoid growth, any papillary or fungous granulations, or other disease of the cervix to account for the bleeding. This part of the organ being put out of the question, the next step is to ascertain whether there be any fibroid growth in or upon the uterine wall, or a polypus growing from the wall into the

cavity of the body of the organ. All these maladies being eliminated, we are at once brought down to a strong probability of granular degeneration, or "veritables vegetations or fungosities" of the uterine mucous membrane. Dr. J. Marion Sims saw the case of which I am to speak, and it was by the above method of examination that we reasoned out a diagnosis which proved to be correct.

And before going further I will say a few words about the pathology of this affection. The lining of the uterus may be simply chronically inflamed, vascular, thickened, softened and disposed to bleed, but without any actual abrasion of its surface. The disease may advance further and the surface become the seat of excrescences composed of soft tissue, very vascular and easily torn. Sometimes these consist of small hemispherical or rounded granulations, giving to the surface of the uterus the aspect of a suppurating blister. These granulations of variable size, from that of the head of a pin to a small nut, are isolated or confluent. They contain a transparent or yellowish fluid, and are manifestly formed by an abnormal development of the mucous utricles.

The true vegetations "or fungosities," much larger than the granulations just described, are presented under two forms, either sessile or pediculated, and varying in size from a grain of wheat to that of a large strawberry. Their surface is cracked and irregular, their color red and consistence very soft. Sometimes they are covered with a vascular fringe. They are seated principally on the fundus of the uterus, in the neighborhood of the Fallopian tubes. They are found also at other points; rarely are they floating. The second variety, which are pediculated, resemble the follicular polypi of the neck; of variable size like the preceding, they have considerable consistence and are of a whiter color.

These two species of vegetation result from hypertrophy of the mucous membrane. M. Robin has given very fully their histological character, but it is not a part of my object to go into such details. They contain the same elements as the

lining membrane, but not in the same precise proportions. The predominence of amorphous matter and capillary vessels, explains the softness of these excrescences, and the facility with which they are crushed or scraped off, and their aptitude to bleed.

As there are not, in the normal state, papillæ in the mucous membrane of the body of the uterus, these vegetations cannot arise from an hypertrophy of them. It is otherwise in the neck. When these vegetations are situated on a level with the internal orifice, they may form an obstruction to the uterine secretions, and these vegetations are almost always complicated with uterine catarrh.

After premising the preceding remarks, I will proceed to give the details of the case to which I have above alluded, and which I regard as a typical one of metrorrhagia, caused by fungous degeneration, or vegetations of the lining membrane of the uterus:

Case.—Mrs. I. L. B. from the South; aged 33 years; married; rather tall; well developed; disposed to *embonpoint*; florid complexion; remarkably handsome, and constitution in every respect perfect. Was married at twenty to Dr. C., by whom she had two children, both of which died the same week from scarlet fever, in the winter of 1864, From the fatigue of nursing these children in their illness, and from great distress of mind afterwards, her health became delicate, without any special disease, and during 1865 she had three miscarriages and the latter part of this year her husband died.

After these abortions her health was not so vigorous. The menstruation continued regular, sometimes rather profuse, occasional leucorrhœa, and she had back-aches, with sense of weight in the pelvis and inability to take long walks, as formerly.

In 1868 she married Mr. B., went to Europe in the Spring, and spent the Summer in travelling. During her travels she complained of increased discomfort, and her menstruation became more profuse. After her return to the United States in the Autumn of 1868, in addition to too profuse menstruation,

she began to have small discharges of blood *between* the menstrual periods. The symptoms so increased that she came to New York and placed herself under my charge in January 1870. At this time she not only menstruated too freely for seven or eight days at her regular periods, but had frequent little discharges of blood between times.

On examination I found the uterus quite low in the pelvis; the os not more than an inch above the perineum; the whole organ body and cervix was engorged and enlarged, measuring full three inches in depth, and the fundus considerably retroverted. The os was large and patulous, allowing a large-sized catheter to pass readily to the fundus. There was always a catarrhal discharge when the bleeding was absent.

She had a good appetite, was well nourished, complexion florid and healthy, and it was a case calling clearly for local treatment. I commenced by applying Churchill's tincture of iodine on a probe wrapped with cotton every three, four or five days during the intermenstrual periods. This was alternated with carbolic acid, one drachm to an ounce of glycerine; a saturated solution of tannin in glycerine, and undiluted liquor subsulph. ferri (Squibb's). This treatment was continued for three months without satisfactory result, although the discharges were moderated by these applications. I next determined to *inject* my remedies into the cavity of the organ, and the cervix being well open, I had no difficulty in washing the cavity out, with tepid water, by the very gentle use of a common hand-rubber syringe with a long delicate tube. The water flowed out readily from the cavity beside the pipe, and I was cautious to inject *very slowly and without force;* after seeing that the water returned freely, I did not hesitate to use the syringe boldly. She sometimes complained of slight colics, but they soon passed off. The medicated probe having failed to arrest the hæmorrhages, I next with the syringe injected Churchill's solution largely diluted, and finding no inconvenience from that, I followed it with a drachm of undiluted preparation; this produced slight colic, so much so that on two occa-

sions I thought it best to give a dose of opium; but the colics were never sufficiently violent to cause apprehension.

These injections of Churchill's tincture promptly arrested the bleedings, as well as the leucorrhœa, and menstruation became normal; the patient gained flesh, she had been quite nervous and restless, but now slept well, ate well, and took long walks with impunity. I repeated these injections about once a week (two or three times between her periods) for some weeks. I then stopped all treatment, and from the middle of May to the middle of July she remained perfectly well, when the weather being extremely hot she went up into the mountains of New Hampshire, where she remained two months more, perfectly well, when the metrorrhagia returned, though with less violence than when I first commenced treating her. About the middle of November of the same year, nine months after she first came under my charge, she returned to New York, and again applied to me for treatment. I now came to the conclusion that there was some morbid condition of the cavity of the uterus, which was not to be reached by the class of remedies I had so faithfully used, and therefore determined to dilate the cervix, explore the cavity with the finger, and determine if possible what was the cause of the continued hæmorrhages. For reasons which I need not state, two months were allowed to pass without carrying out my idea; but early in January the renewal of treatment was determined on, and I asked my friend, Dr. J. Marion Sims, to see her with me. The Doctor agreed fully with me as to the necessity of exploring the uterus, and on the afternoon of the 18th of January, 1871, I introduced a spongetent, which I removed the next morning at 10 o'clock; this was removed and a larger one introduced, in the expectation that by 4 o'clock in the afternoon, the cervix would be sufficiently dilated to allow the finger to pass the internal os. We met at the appointed hour, removed the tent which had been inserted two and a quarter inches, but much to our disappointment, in consequence of the elongation of the organ, the tent was not quite long enough; and although the cervix was very

fully dilated up to that point, the internal os was only partially so, and did not permit the finger to pass well through.

We had determined to explore the cavity, to determine whether there was a polypus or vegetations, and if the latter, to remove them at once with the curette of Dr. Sims. The Doctor introduced the curette, and the first scrape fixed the diagnosis by bringing away several vegetations; he then continued scraping the surface in every direction, and succeeded in removing about a tablespoonful of vegetations, some of which were an inch or more in length, about the size of a crow-quill, and resembling very much an earth-worm, such as boys use for bait in fishing; others were less elongated, either sessile or pediculated, and ranging in size from a grain of wheat to a buckshot. No hæmorrhage followed the operation, which was accompanied by a good deal of pain, but the pain ceased as soon as the curette was laid aside. She continued quite comfortable for twelve hours, but became restless in the latter part of the night, and about 3 o'clock in the morning had a chill, which lasted for two hours, followed by fever. The fever ran pretty high, accompanied by a good deal of uneasiness in the pelvis, but went off with free perspiration in about thirty-six hours. I put her at once on the free use of quinine, and she had no fever for a week, but did not feel comfortable when she sat up for several days after the fever. The curette was used on the 19th of January, and at the end of eight days, I perhaps imprudently allowed her to go out and take a walk. She was in the habit of much out-door exercise; did not sleep well, and lost appetite whenever much confined to the house. The weather was cold and unfavorable, and on account of the crowded state of the omnibus at the time, she could not get a seat home, and was forced to walk some three-fourths of a mile, got her feet cold, and came home fatigued. That night she had fever again, with pelvic pains, which lasted forty-eight hours.

February 1st.—This morning her fever is gone, and she feels quite comfortable. I omitted to mention that her menstrua-

tion came on about six days after the use of curette, lasted five days, without excess or pain.

February 4th.—She is not comfortable out of bed, and on examination, by touch, I find the uterus engorged, the body retroverted (which it was before more or less), and very tender to the touch; a little thin mucous, and sometimes sanious discharge.

I put her on one-sixteenth of a grain of bichloride of mercury, with three of iodide potassa and two drachms of Huxham's tincture cinchona three times a day.

February 6th.—I find her more comfortable, though still in bed, and engorgement of uterus decidedly less. Complains of disagreeable taste in mouth; I ordered the dose of medicine to be diminished one-half, fearing salivation might occur, though I have never salivated a patient in my life with the corrosive sublimate, which I often give.

She continued gradually to improve up to the 24th, when the menses again came on. The enlargement and tenderness of the uterus has gradually decreased, but she has felt some little uneasiness about the back and pelvis whenever she walked about her room.

March 4th.—The menstruation continued but three days, and without any discomfort, and what is remarkable since the first four days after the use of the curette, she has had not the slightest discharge of any kind from the uterus. She went out three days ago to take a little walk, and had the next day a severe nervous headache.

The uterus now seems to have gone down to its normal size for the first time since I first saw her twelve months ago, and as far as position, function, size, feeling to the touch, etc., the organ seems to be in good condition, still there is sensibility about the organ or its surrounding tissues which causes uneasiness in walking, and which has been followed by increased complaint and febrile action every time she has attempted exercise. The most rigid examination can discover no swelling nor tenderness about the broad ligaments or surrounding tissues.

March 15th.—Though she still has backache when she walks, her health is good, all the functions are active; there is no discharge of any kind, and she looks like one getting well.

This case demonstrates the importance of basing the treatment of metrorrhagia not upon the symptoms, but upon its pathology. The intra-uterine remedies which I employed in the early part of the treatment arrested the hæmorrhages for about five months, in consequence of which Mrs. B. regained her flesh and health, and to all appearance was cured. The vegetations which gave rise to hæmorrhages were for the time arrested in growth, and so modified in character as to relieve the symptoms, but the faithful application of persulphate of iron, carbolic acid, and iodine, did not *eradicate* the growths, and when the symptoms reappeared the same remedies had no power to arrest the hæmorrhage. The disease had only been palliated, and not cured. It is possible that the concentrated chromic acid (as used by some gynæcologists) might have destroyed the morbid growths, but having seen bad symptoms follow the use of this remedy, I was reluctant to resort to it. The choice lay next between chromic acid and the curette, and I must say, judging by the number and size of the vegetations, that nothing short of the curette could have reached the difficulty.

I confess that my own experience with the curette has not been large, and my opinions have been formed as much by witnessing its action in the hands of others as my own.

If we turn to the writings of French, English, and American gynæcologists, we find the extremest diversity of opinion as to the value and safety of the curette. Some condemn it as barbarous, while others recommend it in unmeasured terms; and, as generally happens, the truth will be found to lie in the middle. Another important question arises as to the best and safest form of curette. Some use that of Recamier, which is a miniature lithotomy scoop. Dr. T. G. Thomas, who is excellent authority, uses a scoop made like a loop of strong wire, which rakes off the soft vegetations without attacking the mu-

cous coat of the organ. This, he asserts, acts with sufficient thoroughness. Dr. J. Marion Sims says that such an instrument is not efficient, and that the uterus cannot be sufficiently cleared of the morbid growths without employing a more cutting instrument. He has therefore contrived a curette in the shape of a small elliptical ring, attached to a long malleable shank with a handle, which presents a sharp circular cutting edge, and made to scrape like a gardener's hoe, or currier's knife. The cutting edge, however, is set on at an *obtuse angle* with the shank, so as to scrape off the vegetations without cutting into the mucous tissue. It requires, however, great tact to regulate the pressure so as not to remove the mucous lining of the uterus, as I have had occasion to see more than once in the most skillful hands. This instrument of Dr. Sims is certainly the most efficient in removing the vegetations, but is strongly objected to not only by Dr. Thomas, but by Dr. Nœgerath, Dr. Peaslee, Dr. Emmet, and other New York practitioners, most of whom use a similar instrument, but with a very blunt instead of a cutting edge.

Leaving out of the discussion the *danger* of this scraping operation, it may be asked, does it permanently eradicate the growths it is intended to destroy? Are not the growths reproduced after a time with their attendant symptoms? Whether the vegetation be mashed off by a blunt instrument, or scraped off by a cutting edge, the effect on the bleeding vessels is that of an ecraseur—the hæmorrhage is at once arrested, and it is not likely to recur for weeks, months, or perhaps never.

That the morbid growths do reappear in some cases is certain, and that chronic metritis does sometimes follow the operation when rudely done, I have had occasion to know more than once, in the practice of some of our leading gynæcologists. I have now under treatment two such cases, operated on by others, and one of them of eighteen months standing.

In the present state of the controversy, my conclusions are decidedly as follows:

1st. Never use the curette when the uterus is very sensitive to the touch of a probe, or when there are pelvic complications, tenderness in the broad ligaments, ovaritis, etc.

2d. Never resort to the curette until after other remedies have been fairly tried.

3d. If the curette is used, try fairly the blunt-edged instrument, and never resort to that of Dr. Sims' except as a last resort. It may be safe in his hands, but is dangerous in the hands of a less experienced and less expert operator.

4th. There being no hæmorrhage from the use of the curette, I think no immediate intra-uterine medication is required, though some follow the curette immediately with the application of iodine, persulphate of iron, etc. It is proper, however, in a few days, if no fever or inflammatory symptoms supervene, to commence the use of such drugs, and continue them occasionally to prevent the growth of vegetations again.

In the case of Mrs. B., as my object was intra-uterine medication, I attempted with my double canula (described in the "American Journal of Obstetrics") to inject the uterus, but to my surprise, when I threw in tepid water by one of the channels, it would not flow out through the other without a degree of force I never use in injecting the uterus. I use simple hydrostatic pressure, as is done with the nasal douche of Thudichum. I attributed my failure to the blocking up of the eye of the catheter by a clot of blood, but it may have been from obstruction, caused by some one of the vermiform vegetations floating into the eye of the instrument. From their softness and elongated form, this might very readily have occurred.

I would here remark that uterine injections done *with a syringe*, are as a rule hazardous, and should be executed with great caution, unless the cervical channel is large enough to admit the little finger. If my double canula, or any other instrument be employed, it will clog easily, and the uterine current be stopped; 1st. From granulations projecting into the eye; 2d. From the thick mucus of the cervix; 3d. From blood coagula. I have, in an article in the "American

Journal of Obstetrics," on Uterine Injections ,pointed out the danger of using such articles as chromic acid, preparations of iron, tannin, etc., which readily coagulate albumen, and thus render injections impossible by means of a double canula. If the catheter have attached to it a gum elastic tube with a bag at the other end of the tube, any fluid in the bag can be made, by elevating it, to enter the uterus in the most gradual and gentle way, and when the uterine current is once established, the bag may be elevated at any heighth above the horizontal line, and the current run boldly through. If the current does not start as soon as the bag is elevated an inch higher than the catheter, it is because there is some obstruction, and we must see that the tube is clear before we increase the pressure.

Except in obstinate hæmorrhages from the uterus, there are but few cases in which injections are required. When there is hæmorrhage, with well opened cervical canal, I never hesitate to throw in iodine, iron, or any astringent in common use. In chronic uterine catarrh, where the capacity of the organ is beyond its normal condition—where the canal is large enough to admit a double canula—and where the organ is not morbidly sensitive and no pelvic complications exist, injections may be used with safety and benefit. Iodine acts well as an alterative, when well diluted, and simple warm water run freely through, will often set up a new action by which chronic engorgements are removed.

I frankly confess that I have been staggered by my friend, Dr. G. T. Thomas' strong denunciations of uterine injections, but I still believe that in suitable cases they may be used with safety and benefit. Where a syringe is used, the force cannot be well regulated, and I have given my reasons elsewhere for the belief that the unpleasant symptoms arise from the fluid or air being forced by the syringe directly into the circulation.

I have recently, with the assistance of Mr. Stolhmann (of the firm of Tiemann & Co.,) contrived an instrument for medicating the interior of the uterus, which I think will supersede

injections entirely, as more safe and more easily managed. This instrument is described in the May number of your Journal.

Very truly yours,

J. C. KNOTT, M. D.,
No. 50, West 22d St., New York.

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LOUISVILLE, KY., 1871.

*Dr. Gaillard:*

Referring to your Editorial Brevities in the June number of the "Richmond and Louisville Medical Journal," I fully concur with the views and sentiments therein expressed in regard to the inability and failure of the present American Medical Association, as now organized and conducted, &c., to dispose of in a successful manner, questions "upon whose efficient disposition depends the successful future of American Medicine;" and that "the time has evidently arrived when it is necessary to organize a Medical Body which shall have cognizance and disposition of such questions."

In exemplification of the inability and failure of the present American Medical Association to deal with and to successfully dispose of issues and questions of great importance to the profession, I would cite, as an example, the suggestion made by that Body of charging a fee of five dollars to insurance companies for medical examinations. Constituted as that Body now is, after making the suggestion it cannot dispose of, in a successful manner, the differences and issues which spring up between physicians during the process of adopting and endorsing that suggestion. Therefore, as the matter now stands, the carrying out of that suggestion, so far as to give it general application, force and weight, is a failure. Hence, though the suggestion, I think, is a good and just one, it becomes an irritant, and produces discord and broils among the profession. I propose, until a better suggestion or plan is made, the organizing of a Body, to be called The American Medical Court of Appeals. The Body to be composed of as many Judges as there are State Medical Societies. Each State Medical Society to

select and appoint its Judge. The Judges to hold their offices for the term of two years. The Body to meet annually to make rules and regulations for the guidance of the profession; to decide and dispose of all such questions as education, ethics, and matters of controversy; and thereby in its decisions and rulings make a general code of ethics, applicable alike to the whole profession in its bearings and workings. This Body should have its sessions adequately long, and the expenses of each Judge should be paid by the Society which he represents.

A Body so constituted, I think, would do good, create harmony, concerted action in the professional circle, give tone and weight to our profession, and make it, as it should be, grand, great, and possessing an influence appreciated and felt by all.

F. H. Gibson, M. D.

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713 Locust St., Philadelphia,
April 1, 1871.

*Dr. J. D. Jackson, Secretary Kentucky State Medical Society:*

Dear Sir,—Dr. Gross states that up to twenty years ago there had been no cases operated upon in your State by gastro-hysterotomy. Will you be kind enough to take such steps as may be necessary to carry this inquiry to the present time, so that any cases, if there have been such, may be placed to your credit in a general report I am preparing for the whole United States, and greatly oblige. Yours, very respectfully,

Robert P. Harris,
President Phila. Obstet. Soc.

Note.—Dr. Jackson will thank all who have the desired information to transmit it to the author of this letter.—Ed.

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Vicksburg, Miss., June 8, 1871.

*Dr. E. S. Gaillard:*

Sir,—Whilst General Hood's army was "demonstrating" at Decatur, Ala., in the autumn of 1864, private Nations, of the 12th Louisiana infantry, had both legs so injured as to necessitate amputation of the thighs, just above the knee. Dr. W. B.

Field and myself operated simultaneously. We left the patient under the care of Dr. Trotter, of the 15th Mississippi infantry, who treated the case to a successful issue. The man was still living when last heard from (a few months ago). I send this merely to add to the statistical information on double-thigh amputations.

Respectfully,

P. F. WHITEHEAD, M. D.

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SELMA, ALA., 1871.

*Dr. E. S. Gaillard:*

Dear Sir,—The enclosed paper* was written by me for the Alabama State Medical Association at its late meeting in Mobile. The Association, by vote, refused *to hear it read*, and laid it on the table. This was done because the friends (the Faculty) of the Mobile School did not want arguments to appear against it in the Transactions without being replied to. I do not complain of their action in tabling the paper at the proper time; it is parliamentary, and they had the right to do so; but I do seriously resent their tabling my communication before it was read; practically refusing to receive a communication from a member in good standing; condemning it unheard.

This was not done through any feeling of discourtesy to me, I am assured. But I cannot help believing that it indicates a morbid sensitiveness on the part of this School, which can but proceed from a consciousness of error—a disposition to stave off opposition, and by availing themselves of parliamentary tactics, to secure the approval of the State Association or evade its censure. I am not opposed to the Mobile School; I wish it success; but I am opposed to anything and everything at home or abroad, which directly or indirectly tends to lower the professional standard; to increase the number of doctors at the expense of their attainments.

Yours, truly,

BENJ. H. RIGGS, M. D.

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* Published in this number under the caption of Society Proceedings.

# REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

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ART. I.—REGIMEN SANITATIS SALERNITANUM. Code of Health of the School of Salernum. Translated into English Verse. By JOHN ORDRONAUX, LL. D., M. D., Professor of Medical Jurisprudence in the Law School of Columbia College. Philadelphia: J. B. Lippincott & Co. 1871. 12mo., pp. 167.

To those who, in these utilitarian days, care to study the history, as well as the practice of medicine, this work is warmly commended. The great majority of readers deal with the past as they speak of it—as the past; as the grand aggregate of all that has ceased to be; as disassociated from the present; as interesting to the student, only as is the antique coin to the antiquary—not as a treasure of value and profitable gain, but as a memento only of those who have lived in history. There are, however, many, even among the busiest workers who are wiser, who recognize in very much of the pathway of the present footprints of the past; many in whom such evidences arouse pleasant, even profitable memories of forgotten pleasures, or salutary recollections of painfully-escaped disasters. There are those who study the present, most profitably, by that light which America's most eloquent orator has declared to be the best lamp by which our feet are guided, the lamp of experience; the wisdom of the past. To all such persons this volume will be regarded as a treasure; as the great touchstone by which to test much that makes up the currency of the present; as the true analyst of what is new; as the exposer of all which passing as new is but a relic from the library of the past, republished and clad in the modern garniture of the present.

There are yet, in the medical ranks, those who are willing to turn away from the profitable pathway of the pecuniary toiler

and visit in secret those historic galleries wherein hang the honored presentments of those who honored all who are toilers with them. There are yet those who are willing to turn from teeming shelves brilliant in the picturesque garniture of modern medical folios, and to enjoy anew the immortal thoughts of immortal medical men; recognizing in these thoughts elements which transmuted have made modern pigmies great, unjustly prominent, unjustly distinguished. To all who would study the present through the past, this volume is commended.

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ART. II.—ON DISEASES OF THE SPINE AND NERVES. By C. D. Radcliffe, F. R. C. P.; J. N. Radcliffe; J. W. Begbie, F. R. C. P.; F. E. Anstie, F. R. C. P., and J. R. Reynolds, F. R. S., F. R. C. P. Philadelphia: H. C. Lea. 1871. pp. 196.

This valuable work consists of a series of essays extracted from the "System of Medicine," edited by J. R. Reynolds. It is only necessary to say the work contains essays from each of the authors given to indicate its extreme value. It is small, concisely written by the best authorities on the subject; analytical, and well published. The cost is not stated, but will not exceed $2 00.

NOTE.—It is regretted that Publishers do not stamp upon all copies of their publications intended for the Medical Press, the retail price of each volume. The labor of doing this would be small, and would be remunerative, as many are unwilling to order a work until the price is known.—ED.

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ART. III.—SMITHSONIAN REPORT FOR 1869.

This report is unsurpassed by any of the many very valuable volumes that have been issued by the Smithsonian Institute.

The contents are as follows, the annual report of the learned and accomplished Secretary, Prof. Joseph Henry: A Table Showing the Additions to the Collections; The List of Literary and Scientific Exchanges; List of Meteorological Stations and Observers; Report of the Executive Committee; Proceedings of the Board of Regents; Kepler, his Life and Works. By M. Bertrand; Eulogy on Thomas Young. By M. Arago; Memoir of Auguste Bravais. By M. Beaumont; Memoir of Von Martius. By C. Rau; Life of Stefano Martanini. By Carlo Matteucci; Chemistry of the Earth. By T. S. Hunt; Electrical Currents of the Earth. By C. Matteucci; Phenomena of of Flight in the Animal Kingdom. By. M. Marey; The Northern Seas. By M. Badinet; Report on the Transactions of the Society of Physics and of Natural History of Geneva, from June, 1868 to June, 1869; Coronado's March in Search of the Seven Cities of Cibola and Discussion of their Probable Location. By Brevet Brigadier General J. H. Simpson, Colonel of Engineers, U. S. A.; Social and Religious Conditions of the Lower Races of Man. By Sir John Lubbock Bart, M. P., F. R. S.; Principles and Methods of Palæontology. By T. H. Huxley; Cara Gigantesca of Yzmal in Yucatan. By Dr. Arthur Schott; Forests and Their Climatic Influence. By M. Becquerel; Meteorites. By Dr. Brenndecke; Remarkable Forms of Hailstones Recently Discovered in Georgia: Eruption of the Volcano of Colima in June, 1869.

There is in this volume an inexhaustible fund of information extremely valuable and interesting. These Reports are justly honorable to the distinguished and learned gentleman, to whom is justly due most unqualified commendation for the manner in which he discharges his honorable trust. The "Reports" are monuments of science, and Prof. Henry may be justly proud of them. If he is not, he is unlike his countrymen, who regard the Smithsonian Reports as among the few really scientific volumes issued in America.

ART. IV.—THE HALF-YEARLY COMPENDIUM OF MEDICAL SCIENCE. Part vii. January, 1871. Philadelphia: S. W. Butler, M. D. 1871.

This volume (due in January) has recently been received. The reasons given for the delay in its appearance are fully satisfactory. The volume is a very valuable one. It is superior to any previously issued. Dr. Butler is discharging this important labor with success, and with great credit to himself and all of his co-laborers. American journalism is fully represented, and its most valuable material is reproduced with judgment and fidelity. The Compendium deserves a full and generous support.

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ART. V.—BROMIDES—THEIR PHYSIOLOGICAL EFFECTS. By ROBERTS BARTHOLOW, M. D., Cincinnati, Ohio.

This is the essay to whose author was awarded the Fiske Fund Prize for 1869. It will be found to contain the best and most recent information in connection with the valuable medicinal agents of which it treats. Dr. Bartholow is a prolific and successful author, having received several honorary prizes. His industry is rare and most creditable to him, and the results of it are very valuable to his brethren.

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ART. VI.—TWENTY-SECOND ANNUAL COMMENCEMENT OF THE Woman's Medical College of Philadelphia, 1871–72.

The session of this College has been lengthened two weeks, to prevent the students from being overburdened by an excess of duties in a period injuriously brief; or, as is stated, to avoid "crowding lectures and work upon them." How the lectures

are crowded is not explained. Clinical lectures on surgery and diseases of women are given by the male (and female) medical staff to the female students; or, as they are termed "lady students." These "lady students" dissect under the supervision of a male Demonstrator. It is the fashion of the times to say God-speed to these "lady students," but one cannot avoid the conviction, that such damsels had better be learning how to discharge the duties proper and germain to their sex; those gentle offices which make woman the ornament of the hearth and home. In a class of fifty-seven, there is but one student from the Southern States, and she (now known as Dr. Susan J. Taber) registers from High Point, N. C. The great old State can now boast of two more high points appertaining to her; the one a post-office, and the other—speak it plainly, for the word has never before been heard in her domain—a lady-doctor.

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ART. VII.—THE GERMAN CONQUEST OF ENGLAND IN 1875. Porter & Coates, 822 Chestnut street, Philadelphia.

This is a remarkable little volume. It is most clearly and caustically written, and is a biting satire upon the war-policy of the present administration in England. It appeared originally in Blackwood, and has created great attention, both in governmental and popular circles. The American Firm mentioned has very judiciously republished it. The price will not exceed twenty-five cents, and this amount will be well expended in the purchase of this reprint.

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ART. VIII.—MINNESOTA—A HOME FOR INVALIDS.

Those who desire to read a good, though somewhat enthusi-

astic description of Minnesota, in its climatic and therapeutic relations, will do well to purchase this little book. It may be obtained from the publishers, Messrs. J. B. Lippincott & Co., Philadelphia.

## CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—HOR.

BY THOMAS E. JENKINS, M. D.

*Will Snake Poison Kill a Snake?*—Dr. Frayer in India, observed a young and lively Cobra, fourteen inches long, which was bitten in the muscular part of the body by a Krait, forty-eight inches long. The Krait had not bitten for some days before. From Dr. Frayer's report, it appears the Cobra was bitten at 12:50 P. M. At 1 P. M. it was very sluggish. At 1:03 P. M., so sluggish it moved with difficulty, could easily be handled, and made no effort at resistance. At 1:20 it was apparently dying, and its movements were occasionally perceptible, and at 1:22 it died; thirty-two minutes after the attack.—*Phar. Jour. Lond.*

*Arsenic in Chemical Products.*—Sulphuric acid made from Spanish and Norwegian pyrites, contains a large proportion of arsenic, and the various products in which this acid has been used, such as muriatic acid, sulphate of soda, carbonate of soda, bicarbonate of soda, etc., are all contaminated with the poisonous metal.

*Extraordinarily Large Quantity of Clay Contained in a Human Lung.*—The lungs of a person, who had during life-time worked in a factory, and been there exposed to the inhalation of mineral dust, were found to contain, in 1,000 parts, no less than 19.91 parts of sand and clay, giving for the entire weight of the lungs 3 lbs. 1 oz.—*Ander. Chem. in Phar.*

*Caution—Nitro-Glycerine.*—Dr. E. Von Gorup Besanez gives an account of the effects of the explosion of only ten drops of nitro-glycerine which, by one of the pupils in his laboratory, were put into a small cast-iron saucepan, and heated with a Bunsen gas-burner. The effect of the explosion was such that forty-six panes of glass of the windows of the laboratory were smashed to atoms, the saucepan hurled through a brick wall, the stout iron stand on which the vessel had been placed was partly split, partly spirally twisted, and the tube of the gas-burner was split and flattened outwards.

It has been found that when nitro-glycerine is caused to drop upon thoroughly red-hot iron, it flashes off very much as gunpowder would, but if the iron is not red-hot, but yet hot enough to cause the nitro-glycerine to boil suddenly, an explosion of a frightful character takes place.—*Comptes Rendus.*

*Sarco-Lactic Acid in the Urine of a Patient Suffering from Trichinosis.*—Simon and Wibel record the fact of the presence of the flesh-lactic acid in the urine of a patient alluded to above. The presence of this acid in the excreta of a patient suffering from this disease is rather interesting, as indicating increased activity of oxidation and rapid decomposition going on in the system, the acid alluded to being the product of the oxidation of fats and albuminous substances.

*Osseine as Food.*—M. Fremy, in the "Comptes Rendus des Seances de l'Academy des Sciences," has a long and enthusiastic paper on Osseine as a principle fit for food.

This substance is the organic matter of bones after the lime salts and other mineral matter contained therein have been removed. The quantity of Osseine in fresh bones of slaughtered animals amounts to about thirty-five per cent. of their weight.

This body should not be confounded with gelatine, which is a product of the prolonged action of hot water upon bone. The latter substance also differs from osseine in not having an organized structure

Dr. Hager states that the addition of ten drops of chloroform to 100 grammes of cod-liver oil renders that oil perfectly agreeable to the palate without in the least impairing its good quality as a medicine, or interfering with its effect on the system.—*Neues Jahrbuch fur Pharm.*

*Sulpho-Vinate of Soda as a Medicine.*—This substance when taken into the stomach, is decomposed by the acids of the gastric juice, into alcohol and sulphate of soda, thus yielding a laxative agent and a stimulant to counteract its too debilitating effect.

*Liqueur de Villate as Modified by M. Nelaton.*—

℞.—Acid Acetic, 100 grs.;
Sulphate of Copper, 10 grs.;
Sulphate of Zinc, 10 grs.;
Acetate of Lead, 5 grs. M. ft. sol.

*Liniment for Cracked Nipples.*—

℞.—Oil of Cade, 7 grs.;
Oil of Sweet Almonds, 6 grs.;
Glycerine, 5 grs. M. s. a.
[*Union Medicale.*

*Syrup of Iodide of Potassium and of Iron.*—

℞.—Iodide of Potassium, 20 grammes;
Iodide of Iron (½ sol.), 15 grammes;
Orange Flower Water, 30 grammes;
Syrup of sugar (concent), 1 litre.

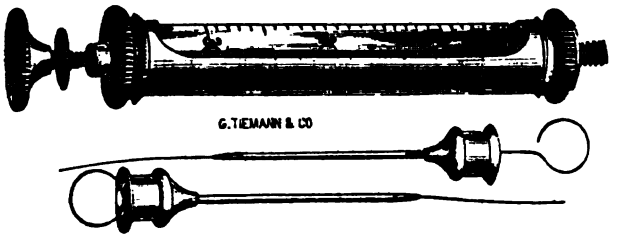
Dissolve the iodide of potassium in the orange flower water, add the solution of iodide of iron, and mix the whole with the syrup.—*Jour. de Pharm. et de Chim.*

*Pancreatic Juice in the Local Treatment of Cancer.*—Prof. Schiff has experimented upon two fragments of the same cancer with gastric and pancreatic juice. He concludes by attributing a greater value to the last, which, according to his investigations, digests the tumor without attacking the blood-vessels and exposing the patient to hæmorrhages. The gastric juice destroys all the tissues, while the pancreatic juice destroys only the cancer-cells.—*New York Medical Journal.*

## MISCELLANEOUS.

"Non omnes eadem mirantur amantque."

A NEW HYPODERMIC SYRINGE.—We present our readers with a new Hypodermic Syringe, devised by Geo. Tiemann & Co., which, we think, has decided advantage over others. These advantages consist, for the most part, in the peculiar construction of the instrument, which allows of its being kept clean with very little trouble, in the comparative improbability of its getting out of order, and its non-liability to breakage.




As represented in the cut, the glass cylinder is encased in a metal mounting, fenestrated to show the graduation for minims. No cement is used to fasten the parts to each other, but in its stead there are washers at each extremity of the cylinder, which not only insure the exclusion of air, but effectually prevent the annoyance of the glass becoming loose.

The instrument can be taken apart for cleaning by simply unscrewing the nut through which the piston plays. The piston is made longer than the cylinder, to allow of the washer being pushed through far enough to be freshened, oiled, &c., without the trouble of getting at it in the old way.

The two canulated points are made of tempered cast-steel and much finer than those usually employed, an advantage in lessening pain on the introduction of the point.—*The Medical Record.*

DR. S. FLEET SPEIR'S ARTERY CONSTRICTOR, Designed for the Instantaneous Hermetic Closure of Arteries without the use of Ligatures or other Foreign Substance to be Left in the Wound—A Substitute for the Ligature, Acupressure and Torsion. [Extracts from the Prize Essay to which was awarded the Merit and Cash Prize by the New York State Med. Soc., Feb. 1871, by S. Fleet Speir, M. D., of Brooklyn, N. Y.]

"The Artery Constrictor consists of a flattened metal tube six inches (more or less) in length, open at both ends, with a sliding steel tongue running its entire length, and having a vice arrangement at the upper extremity by which it can be made to protrude from or retract within the tube or sheath. The lower end of the tongue is hooked-shaped, so as to be adapted to the artery to be constricted. It is so shaped that having grasped the artery, it can be made to contract upon it by means of the vice at the upper end, which forces it within the sheath.

The hook of the tongue is so shaped and grooved as to form only a compressing surface, by which means the artery, when acted upon by the force of the vice, is compelled to assume the form of the curve of the tongue, and the artery is constricted in such a way that the internal and middle coats give way, but the internal coat is preserved intact. The severed internal and middle coats contract, retract, curl upon themselves, and are driven down the artery, in the form of an invagination or plug, by the continued pressure of the grooved tongue as it passes on into its sheath. The artery may now be slipped out of the instrument, and it will be found that the external coat has been compressed at that point where it was in contact with the instrument, and the internal and middle coats will be found divided and invaginated on either side of the constriction. This invagination of the internal and middle coats is of itself sufficient to arrest the flow of blood. As soon as the current of blood is arrested in the vessel, a coagulum forms upon the invaginated internal and middle coats, and this completes the occlusion of the artery."

DIRECTIONS FOR THE APPLICATION OF THE ARTERY CONSTRICTOR.

"The application of the constrictor is very simple. The artery is to be caught up by a tenaculum or a pair of forceps (this latter is best) and the tongue of the constrictor placed around the vessel, the tongue is then drawn tightly upon the artery by means of the vice arrangement at the upper end of the instrument. As soon as the screw turns with a considerable degree of resistance, or the internal and middle coats are seen to be invaginated sufficiently, by noticing their movements in the end of the artery, the instrument is to be detached from the artery, and the operation is completed. The length of time required for the application being about one minute or more, according to the size of the artery."

In large arteries the tongue of the constrictor must be drawn into the sheath further than is necessary for small arteries. This is the one point necessary to be attended to in the closure of large arteries—viz., to secure a perfect invagination of the internal and middle coats. This invagination may be made as thorough as is desired by drawing the artery into the tube as far as needed to effect the object. Some of the instruments have been made with stops to indicate when a proper invagination has been reached, but by further experience it was found that the touch was the best guide for the operator. By a continued traction upon the external coat of an artery, made through this instrument, after the invagination is once commenced, the internal and middle coats may be peeled up and pushed entirely out of the external coat, and the latter be drawn out through the sheath, freed entirely from its inner lining, so that the operator has it in his power to produce invagination to any desired extent, and by making a perfect invagination, failure in the use of the instrument will be impossible.

It is well always to allow the blood to flow into the artery, (if it has been controlled by the tourniquet or otherwise during the operation) before removing the constrictor—this secures a perfect clot upon the invaginated coats, which can hardly be displaced afterwards.

For convenience, the constrictor may be made with three sizes of tongues, to be used with one tube.

A pocket-case instrument is also made as a substitute for the torsion forceps, than which it is more easily and effectually applied.

*The Effects of Arsenic in Phthisis.*—The effects of arsenic in the treatment of phthisis have already been investigated by Dr. Cersoy, of Langres, and Dr. Isnard has lately contributed some of his experience on this subject in memoirs published in recent years. Dr. Isnard now gives a summary of his views in reference to the local and general action of the drug. He states, in the first place, that when arsenic is employed in phthisis, the febrile disturbance, when it exists, is weakened and suspended, while the nocturnal sweats, the general excitement, and the sleeplessness are also diminished. As the fever abates, the digestive function is improved, and the diarrhœa or constipation or vomiting disappears; in short a general improvement becomes perceptible. As the constitution improves, the local lesions and the lung itself undergo a beneficial change, and the cavities in the lung are cicatrized. This result is proved, according to Dr. Isnard, by the relief of the cough, the diminution of the secretion of the bronchial tubes and of the pyogenic membrane of the cavities, by the substitution of mucous for purulent sputa, and of dry for humid rhonchi. The general conclusion drawn by Dr. Isnard as to the action of arsenic in phthisis is, that by its local and general action, at once curative and preventive, it influences at once the capillary system and the different tissues, affecting both the lungs and the whole economy. It does not attack the tubercle directly and specifically, like a parasiticide, but directs its action to the elements and tissues which remain actually or relatively healthy.—*Half-Yearly Abstract of Medical Science.*

*Migration of White Blood-Corpuscles.*—Dr. Caton, Liverpool ("The Academy," No. 17, for February 1, 1871) has contributed to "Humphrey and Turner's Journal of Anatomy and

Physiology" for November, 1870, the results of his examination of the blood-vessels of the mesentery of frogs, and corroborates in all essential points the observations of Addison, Cohnheim, Stricker, and others as to the escape of white blood-corpuscles through the walls of the smaller arteries and capillaries. Dr. Caton operated on nearly a dozen frogs in succession without seeing more than—first, a dilatation of the blood vessels; secondly, a gradual retardation of the flow of blood till complete arrest occurred, the parts being always considerably congested; and, thirdly, a tendency of the white blood-corpuscles to arrange themselves on the inner surface of the vessels, presenting at the same time active amœboid movements. In no instance was the passage of blood-corpuscles through the vascular walls observed. Later, however, when operating, near the commencement of summer, on strong, healthy frogs, the migration of the cells was distinctly witnessed; and he gives sketches of the forms assumed by the corpuscles thus traversing the walls. He has not observed any migration of red corpuscles. Fish did not prove suitable subjects, but the migration process was observed in perfection in tadpoles.—*The Med. Times, Phila.*

*Pathology of Angina Pectoris.*—MM. A. Eulenburg and P. Guttman discuss ("Archiv fur Psychiatrie," t. ii 1869) all the facts known and the theories advanced in regard to this affection, and they conclude that it is a neurosis both of motion and sensation. The symptoms to which it gives rise may be excited by causes of a different nature, even extraneous to the heart. All the cardiac nerves are probably more or less affected in this disease, and the variation in the phenomena observed in different individuals results doubtless from the more or less active part taken by the nerves which unite together in the cardiac plexus in the production of these phenomena. It is probable that the *great sympathetic* performs the most important part, inasmuch as it constitutes the larger portion of the cardiac plexus.—*Archives Generales*, Sept., 1870.

*Chloralum.*—This antiseptic and disinfectant, which is at-

tracting so much attention in England, is a chloride of aluminium. It is claimed that solutions containing but a small fraction of *one per cent* of this componnd are sufficiently strong to preserve fish and meat which have been simply dipped therein, and then suspended in dry air. It is quite odorless, which gives it an advantage over carbolic and cresylic acids for many purposes. It has been received with especial favor by medical men, who are using it in the treatment of wounds, for arresting the fetid emanations of cancers, checking the lesions in diphtheria and scarlet fever, preventing suppuration, and the like.—*Boston Jour. of Chem.*

We would call the particular attention of our readers to "Hawksley's Clinical Thermometers," an invoice of which has just been received from London by the Messrs. Tieman & Co. The scale, in fifths of a degree, is engraved directly on the glass, thus doing away with the inconvenient attachment of an ivory plate, and rendering the instrument a simple and portable cylinder. They are self-registering, and of different sizes, from six inches to three; the one which we are now carrying (Prof. Beale's pattern) measuring, case and all, but four inches in length and a quarter of an inch in diameter. The difference in cost between these and the cheaper instruments in the market is more than compensated by their greater convenience and durability, and there can be no excuse for any practitioner being without an indispensable aid in diagnosis which he can carry in his waistcoat-pocket.—*New York Medical Gazette.*

## MEDICAL NEWS.

**'Nulla dies sine linea."**

"The Medical World," a new monthly journal, will be soon published in New York. It will be under the control of R. A. Vance, M. D., editor; published by W. A. Baldwin & Co.;

will contain in each number forty pages, and will be issued at $1.50 per annum. Further particulars will be given when the first number is recieved; this is expected in July.———A new medical monthly has recently been commenced in Philadelphia, "The Medical Cosmos." Terms, $1 per annum; each number to contain sixteen pages, edited by G. W. Zeigler, M. D.——— Dr. Curtis, (Report and Proceedings of the Obstetrical Society of Boston—"Boston Medical and Surgical Journal)," spoke of a girl at the Massachusetts General Hospital who, two years ago, when only thirteen years old, bore a child. She menstruated at twelve. Dr. Abbott mentioned the case that occurred at the Monson Almshouse a few years ago; the mother was eleven years old, and the father sixteen.—*Med. Archieves.* ———The long and harassing law suit intended to eject the present Faculty of the New Orleans Medical College, has been decided in their favor. Further particulars will be given in the August Journal, with all information in regard to the re-opening of this excellent and well-conducted institution.———The Chair of Surgery, recently made vacant in the Washington University, Baltimore, Md., by the resignation of Dr. Edward Warren, will be filled by Dr. George G. Fernandis. Dr. Fernandis is a Maryland physician of thorough education; has enjoyed rare opportunities in Europe; and his friends are sure of his achieving a brilliant success.———The physicians near Paducah, Kentucky, have formed a Medical Society. The first meeting was an entire success. The particulars will be given in the August Journal.———The Dowager Marchioness, of Lothian, is training as a nurse in one of the London hospitals. ———Twelve deaths from chloroform, hitherto unpublished, are reported in the "Cincinnati Lancet and Observer" for January.———Dr. Henry H. Smith, Professor of Surgery in the University of Pennsylvania for the last twelve years, has resigned. His place has been filled by the election of Dr. Agnew, of Philadelphia, a surgeon of distinction and a very superior teacher and operator.———The deaths from small-pox, in London, in the latter part of January, were near one hundred and

fifty per week. The disease puts on the same malignant character there as it did in San Francisco.———One hundred and fifty pounds of opium, the produce of Australia, were sold in the Victoria market last year. It was of good quality, having eight to ten per cent of morphia. The yield was from fifty to eighty-four pounds per acre.———A physician in Canton, N. Y., being requested by a life insurance company to say whether a second physician was competent as a medical examiner, answered in the affirmative, and inclosed a bill of $5 for the service rendered.———On one day in each week a lecture is delivered to female medical students in the wards or amphitheatre of the Pennsylvania hospital. We believe the cases for illustration are derived from the women's wards only.—*Medical Times.*———The "Lancet" reports a case of cæsarian section after death in which the child was revived, and is now three years old.—*Medical Times.*———Dr. Edmund Andrews, of Chicago, Ill. ("Chicago Medical Examiner"), furnishes an elaborate paper on "Prostitution and its Sanitary Management," showing, with other facts, that the proportion of registered prostitutes to the population is greater in cities adopting the license system than in those not adopting it. In Chicago there is one prostitute to 230 inhabitants; New York, 1 to 518; London, 1 to 544; Liverpool, Bristol, and Plymouth, 1 to 193; Glasgow, 1 to 394; Madrid, 1 to 270; Manchester, 1 to 557; Birmingham and Sheffield, 1 to 709.

## EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

*The Presidency of the American Medical Association.*—As soon as the June number of this Journal appeared, the editorial written under the above caption was published in full in the *Courier-Journal*, the oldest and largest daily newspaper in this city. This editorial was published in the paper mentioned

in order that its editor might afford to Dr. Yandell, his personal friend, an opportunity of "making a point" for himself before the general public. This statement will of course be fully appreciated by the medical public. The editor of the *Courier-Journal* also stated that the editorial published would make good reading for the patrons of his paper. It was published with Dr. Yandell's knowledge and consent. On the following morning, Dr. Yandell's reply (at great length, and carefully prepared) was published in the same newspaper.

To the Journal editorial the editor of the newspaper prefixed the following caption: "A RAMPANT ASSAULT UPON THE PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION BY THE EDITOR OF THE RICHMOND AND LOUISVILLE MEDICAL JOURNAL." To Dr. Yandell's reply, he prefixed this caption: "Dr. YANDELL'S REPLY—A COMPLETE VINDICATION." These captions, of course, caused a pre-judgment of each article in the mind of the reader. It was a course so fair, so just and so generous, as to attract universal attention; and to elicit the most flattering commendation.

In the issue of the *Courier-Journal* containing the June editorial, there was no editorial comment; but when the paper containing Dr. Yandell's reply appeared, there was a special leading editorial, the whole tenor of which, like the captions used, was to give one writer every possible advantage, and to create for the other every possible injury. This editorial sustained Dr. Yandell with a devotion and assiduity so touching and tender, that before each reader there must have appeared the philanthropic picture of a faithful friend propping and pillowing a helpless brother.

If one could so do injustice to the memory of the honest Damon as to suppose him a noisy Charlatan or advertising Doctor, who had adroitly secured the Presidency of a Syracusan Society, and if one could further conceive of Pythias actually publishing a daily newspaper, in whose columns his friend had always enjoyed an unending and unjust glorification, the historical record of these friends is

such as to warrant the assertion, that had Damon's tricks been exposed, he would have received a newspaper defense from his faithful Pythias equalling perhaps, but certainly not surpassing that recently made for Dr. Yandell by his true and devoted friend.

Dr. Yandell's reply was characteristic; it was his autobiography; a charming picture with the lights all brilliant, and the background enchantingly roseate. Dr. Drake (contrary to his notorious testimony) had been indellibly impressed with the brilliancy of Dr. Yandell as a pupil and a graduate. Extravagant introductory letters were forced upon this pupil, who was now to make glad the hearts of distinguished Europeans. Liston adopted him, and, after being compelled to surrender him to science, charged Velpeau to dry-nurse so rare and remarkable an American. Velpeau responded heroically and like a man to the overpowering demand made upon him. Brilliant letters were sent by Dr. Yandell (the wholesale plagiarism of these not being denied) to his native land; Dr. Oliver Wendell Holmes praising these letters, and giving, very innocently, just commendation to the editors and reporters of the *Gazette des Hopitaux*, from which paper the letters were chiefly extracted. Dr. Yandell then returned and, as is historically known, established that magnificent Institution so everlasting—the Stokes Dispensary. Torn from this magnificent establishment, he sought the tented field, and became the pet at divers Headquarters; gaining at these favorable points a knowledge of surgery so overshadowing that no one ever had occasion to criticise or dispute it. At the close of the war he returned a pennyless patriot; notoriously houseless and homeless; and since then had been tormented by a number of patients far exceeding his desires; so overwhelming indeed as to debar him of rest and recuperation. Such was this reply. An endless, ludicrous, and fustian piece of advertisement and self-glorification. One of the daily newspapers very justly said, in comment, that when Helmbold read it, he would hang himself in despair. The glorious visions of his Medical Palace, his regal home,

his princely equipages, which the well-paid daily Press of America had, like a faithful mirror, perpetually reflected, would vanish and become as baseless fabrics, in the presence of the brilliant light with which his rival now dazzled the popular gaze.

Yes! this autobiography of Dr. Yandell, like that of Barnum, is wonderful indeed, but like that of Barnum it does not bear even the gentlest criticism. It is like that fabled fruit growing upon the banks of the Dead Sea; pleasing and beautiful to behold, but which when grasped for examination, vanishes, proving to be ashes and nothingness.

Beyond this self-glorification, and this use of complimentary letters of introduction, (either copied or repeated at random) the reply of Dr. Yandell amounted to nothing more than an evasion of many of the charges made, and a denial of the rest. As this denial and evasion were so absolute, and as the secular public had been made, in part, the great jury before which the issue was to be tried, the following reply to Dr. Yandell's "Complete Vindication" was published in the *Courier-Journal* on the succeeding day:

*A Reply from the Editor of the Louisville and Richmond Medical Journal to the President of the American Medical Association—To the Public.*

When Dr. D. W. Yandell was elected to the Presidency of the American Medical Association, his public record was reviewed by the undersigned, the editor of a medical journal. To publicly review the public record of a public man is a right so undeniable, as to require no demonstration. The editorial was manifestly a review of Dr. Yandell's public record. To claim it as an intended biography is an effort so unjust that it is evident to every reader.

The writer could not waste his time in seeking the details of an insignificant life, nor could he, without a loss of reason, inflict such details upon innocent readers. Such facts as were known to the local public, or at least to a material portion of it, were truthfully recorded. To know such facts, and not under present circumstances to faithfully record them, would have been unjust to the medical profession, for whom the editorial was written, and a just cause of disgrace to the writer. Public character has been honestly reviewed. Private character has been spared.

No one could have been more surprised than was the writer, when his editorial appeared in the "Courier-Journal." Its appearance, and the comments of the editor of this newspaper, are so remarkable as to justify brief notice. With a claim of fairness on his part, the caption placed by him over the writer's editorial was such as to cause a pre-judgment in the mind of every reader. With a claim of fairness, the caption placed by him over Dr. Yandell's reply was such as to secure, if possible, a favorable pre-judgment. He objects to this public review of a medical President, and yet, in every issue of the paper, not only is the public, but the private character of the President of the United States persistently attacked.

He states that the editorial of the writer was offered to the "Courier-Journal" as an advertisement. It was not offered by himself at all, nor, so far as he knows, was it offered by any one as an advertisement. If the "Courier-Journal" is prepared to assert and believe that Dr. Yandell is all which in its columns he is represented to be, it is entitled to its opinion; the example which it presents of claiming justice for its own opinions, while aspersing the opinions of others, will not be adopted. So much for the editorial comments of this paper.

Dr. Yandell, in his reply, manifests many of the vices with which he is constantly charged; an advertising and eulogizing of himself, of which all but charlatans are ashamed; an evasion of every charge or a denial of them, as this course can, at least for a day, save him from fast-coming and unavoidable disgrace; a cowardice that is undeniable; unblushing falsehood in regard to the antecedents of an opponent; a use of complimentary letters (that are always notoriously flattering), which are intended but for private purposes, and which no one ordinarily organized could be induced to publish; a glorification of himself so endless, that curiosity in regard to the stupendousness of his egotism and want of propriety subordinates the reader's disgust, and he reads on expectingly and disappointedly to the conclusion.

Dr. Yandell informs the public that the writer came here to retrieve his broken fortunes, etc., when Dr. Yandell knows that the removal of the journal which has unmasked him, was due to the unanimous invitation of the Kentucky State Medical Society, and because its editor had been twice invited to a chair in the Kentucky School of Medicine.

The honesty and the danger of undertaking to act as the President of the American Medical Association, when he is the

confessed repudiater of its laws, is conveniently evaded by him in his reply.

The denial of his rejection at the period of the graduation of his class, and his publication of the compliment, said to have been bestowed upon him by Dr. Drake, are characteristic. It can be proved that he was unable to graduate, and the testimony of Dr. Drake was, in truth, exactly the opposite of that which is published. The imputation of falsehood to Dr. Henry Miller, of this city, from Dr. Yandell, coming from so young a man to one so venerable and so distinguished, is an outrage so gross and cowardly that no one but Dr. Yandell could have perpetrated it.

The endless plagiarism in his original correspondence are conveniently ignored, though it can be proved that he was detected in the act.

His inability to show that he was in any way connected with the regimental, hospital, or operating corps of the army, furnishing, as such service would, some pretext for his claim to surgical skill, is very manifest.

His conciliation of the commanders with whom he served is freely conceded. None who know Dr. Yandell ever objected to his deportment towards those in authority. How he treated his subordinates, however, is the true test of the man.

Dr. Yandell informs the public that he is prevented from exacting a personal responsibility of the writer, because of the writer's physical disability, he having lost his right arm on the field of battle when Medical Director in the Army of Virginia —having arranged the hospital department in the rear before the battle, not during action, as was Dr. Yandell's method—and being in immediate attendance upon the staff with which he was serving. When Dr. Yandell has been grossly and repeatedly insulted with impunity; publicly and privately denounced as a coward, with no desire or movement on his part approximating a readiness or even a willingness to fight, it argues a profound misapprehension on his part of the credulity or common sense of the public to suppose that they can believe he is prevented from action now because of the disability specified. The writer has never written or spoken a word since his loss for which he does not hold himself responsible, and when a contrary course is attributed to him, he can only reply that, if he could be capable of such conduct, he would scorn himself almost as much as he does the man who can take refuge behind such a pretext.

It suits the purposes of Dr. Yandell to call a review of his public (not private) record "an attack." If political journals

review political men, if art journals review scientific men, why should a medical journal not review the public record of a medical man? What must have been the baseness of this record when he terms such a review "an attack." Do honest men ever term the daily reviews of public characters, as seen in magazines, newspapers, and reviews, "attacks"; were the scathing criticisms of the "Edinburgh Review" termed "attacks?" Did Macaulay attack Nares, Croker, or Lord Bacon? Did Thackeray attack Swift? The word is a new one in this relation, and certainly a most convenient one.

Some attribute malice to the reviewer, but he has nothing to fear from Dr. Yandell, and certainly if he supposed Dr. Yandell to be in his way, he would turn from such a path. Others allege envy to be the writer's trouble, but surely, believing the facts which he has published to be strictly true, it would be preposterous to suppose that envy of such a record could be possible. The real object of the reviewer, the discharge of a duty, and the declaration of the truth, will in time be surely accepted. Of this the writer entertains no doubt. He has written what he believed to be strictly the truth, and if ever convinced of the contrary, he would with promptitude make the amplest public acknowledgments and reparation. He would far sooner think well of Dr. Yandell than ill.

There is but one partial correction to be made in the statement mentioned in the editorial. Dr. Yandell is charged with having complimented a distinguished medical officer in the Confederate army upon the efficient discharge of his duty, and having upon the same day removed that officer (a confessed friend) and placed a relative in this position. The documents show that he endeavored to do this, but failed in the attempt. This statement of the matter is even more discreditable to him than the first. When verbally and properly denounced for this, he acted as has been stated.

The writer cannot lose this opportunity of publicly thanking Dr. Yandell for the marked courtesies and extreme kindnesses alleged by Dr. Yandell to have been extended to the writer upon his arrival in this city. A single visit, made after most of the physicians of the city had called, and another visit to ask a favor, are obligations so unquestionable that nothing less than this public acknowledgment would be an adequate expression of gratitude.

As to Dr. Yandell having lost so much for the cause in which he imperiled everything but his person, the circumstances of his going, and the explanations attending his return, are so well known as to require no description.

Finally, if there be strength in the writer's editorial, this will be found to consist in the authenticity of the facts. These facts Dr. Yandell denies. The writer will not drag before the general public many who have given the facts published, but if the names of these reliable gentlemen are desired, they can be obtained from the writer. These gentlemen will, in justice to themselves and for the good of the medical profession, authenticate fully what has been stated. Dr. Yandell will find that if the undersigned cannot (as can Dr. Yandell) "write English," he can at least write the truth. E. S. GAILLARD.

As many persons so misconstrued this last paragraph as to assume that the writer expected the general public, and not Dr. Yandell, to obtain the proofs publicly tendered, and as it was necessary to guard Dr. Yandell against the evils of such a misconstruction, the following card was published in the secular Press one week after the above article appeared:

*A Card—From Dr. E. S. Gaillard.*

*Editors of the Louisville Ledger:*

Gentlemen,—As yourselves and many of your readers do not, apparently, appreciate the meaning designed to be conveyed in the concluding and most material paragraph of my reply to Dr. D. W. Yandell's communication, I desire to substantially repeat it, as follows: If there be any force in my editorial (which was written for physicians, and which was published without my request or knowledge in the "Courier-Journal,") such force consists in the truth of the charges made. Dr. Yandell denies the truth of these charges. I will not (for reasons that all must understand) drag before the general public those distinguished physicians who have given me the facts published, and thus impose upon them the public and unpleasant labor of sustaining charges that I have individually made; but I publicly offer to Dr. Yandell to give him the names of these gentlemen, with the assurance that they are ready to prove the truth of the charges made. They will authenticate the facts published, and demonstrate that they are true.

Such was substantially what was contained in the last paragraph of my reply. Please publish the following note:

Respectfully yours, E. S. GAILLARD.

NOTE.—Where charges destroying one's social and professional standing are publicly made, and the witnesses prepared to authenticate such charges are publicly declared to be ready to do so, it was naturally expected that Dr. D. W. Yandell would be quick to obtain the names offered to him; quick to re-

fute responsible charges affecting all that is valued by a gentleman and a physician. He has been afraid to confront these witnesses. Nevertheless, these charges and many others, fully authenticated by physicians of high character in several States, will be presented to the medical profession, and if Dr. Yandell ever attempts to preside at the next meeting of the American Medical Association, at Philadelphia, he will only be allowed by that Body to do so when these charges are fully refuted. His honor has, in vain, required him to act since the names of authenticating witnesses were publicly offered to him; his necessities will compel him to act when he is publicly tried by the American Medical Association at Philadelphia. E. S. G.

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As no President of the American Medical Association has ever (be it said for the credit of American Physicians) had such charges preferred against him; as the charges preferred against the present President (be it said to the humiliation of American Physicians) are literally true; and as such charges, when true, in regard to the highest medical officer of the chief medical organization of America, cannot be too generally or fully known, proper space has been devoted to their publication. The course adopted is a necessary and a just one, and will be productive of the best results.

*Tweedle Dum and Tweedle Dee; or The Proceedings of the American Medical Association.*—As the chief work of the Association was to discuss the "woman question," and as Dr. Davis, a distinguished member, openly declared that the result of this discussion amounted to about the difference between tweedle dum and tweedle dee, these words of Dr. Davis form a new and not inappropriate caption for any published allusion to the Transactions of the last meeting.

The address of the President was in most respects excellent. He reviewed "the negro physician question," and assumed that as negroes were allowed certain privileges and associations in Europe, the same should be allowed them here. Such reasoning is so illogical as to scarcely need refutation. If Dr. Stille had seen military service, he would have learned that certain privileges may be allowed to a few soldiers isolated from an army, which would prove ruinous, where for the harmless few is substituted the dangerous many. When, as in Europe, one meets the educated negro forming but a unit in the thousands of the white race, it

may be well to accord to him all the privileges demanded; but where, as in parts of this country, one meets the illiterate, indolent, untutored negro, so often morally, mentally, and physically unclean, and forming often the greater part of a community, it would be the height of folly to grant to such the privileges accorded to the educated negro as seen in Europe. There is no analogy between the negro as seen in Europe, and the negro as seen in the Southern States; and all arguments based on such analogy, are of necessity baseless and untenable.

Dr. Stille's estimate of woman is not a generous one; indeed it is in many portions of his address not just. Woman is far superior to the type which he has drawn and criticised. His statement that woman in her efforts to become a physician, has given trouble only at comparatively obscure Medical Colleges; that in great Medical Centres she has given none, is remarkable. The application of this remark would, perhaps, cause Dr. Stille unpleasant emotions. The Philadelphia physicians have, from time immemorial, prided themselves upon the claim of their city being the chief Medical Centre of this country, and yet it is only in this city that women seeking the medical degree have given trouble. If Dr. Stille believes his rule to be true, he cannot object to its being rigidly applied.

The debate on this question is so voluminous that it would be unjust to the reader to give anything more upon this subject in this number. This debate is historical and interesting; but it is mortifying, and often disgraceful in the extreme.

Dr. Storer, of Boston, intimates that Dr. Atlee, of Philadelphia, is in favor of consultation with female physicians because his consultations would be profitable.

Dr. Atlee hurls back the accusation "in the gentleman's teeth," and intimates that Dr. Storer objects to the recognition of woman as a physician, because some persons are afraid of losing their practice.

Dr. Gibbons mildly suggests that woman's monthly physiological disturbance should be no material objection to her pro-

fessional proficiency, for her disturbance is only mensual, while that of male practitioners is ephemeral; the monthly sexual cycle of woman producing less mental disturbance than the gastric ephemeral cycle in man. In Dr. Gibbons's estimation it is not much learning that maketh the physician mad (as Felix declared to Paul) but, melancholy to relate—much drinking. This morceau was received very much as that of the clown in the ring; the whip came down, the wit roared, his apology was heard, and the exercises were resumed.

Dr. Stille thought the legislation of the Medical Societies in his State was wrong. It was not thus in *the* Society of Philadelphia, to which only distinguished physicians belong; the Society of which he is a member; of which he had been for innumerable years a censor, and also its President.

Dr. Gibbons desired to express his extreme respect for all of the members of the Association; on account (it is supposed) of the manner in which they treated his libel on physicians; indeed, he valued and prized these hissing gentlemen so much that he wished some one to catch a few of them for him, in order that he might retain them and preserve them in his museum.

Dr. Moore, of Boston, thought that the debate ought to be closed, because the gentlemen "had ventilated themselves sufficiently." The kind of apparatus worn by each he did not criticise or explain; though each reader of the Transactions will never be satisfied until his curiosity on this subject is fully gratified. The scientific world indeed has a right to know how the individual members of this Scientific Body were individually ventilated; whether Reid's system, as applied to the British House of Commons was the favorite, or that of Lewis Leeds, which did such good service during the late war. Whatever may have been the favorite patent, the apparatus worn by each speaker seemed to work as though it had been freshly lubricated, and must certainly have excited the envy of those silent, careless members who, like the foolish virgins, had neglected to provide themselves and their machinery with suffi-

cient oil for the occasion. It may have been that those gentlemen who gave forth no sound, had on their ventilators also, and well oiled for use, but were afraid to open those valves which others manifestly were unable to keep shut. It is to be hoped that the ventilators worn at future meetings will be regulated before their valves are publicly opened, and the instruments set in motion.

The ventilators brought from Boston, Philadelphia, and San Francisco, appeared to be especially defective in their construction, and seemed to work with all the irregularity, inefficiency, and noise of a watch with the main spring broken.

Jesting apart, there was nothing of a scientific character done by the Association at its last meeting. The profession, as a whole, feel ashamed when they look at the record, and blush that their highest Body should have presented such a spectacle.

The Association, as a scientific body, has for many years had a good record; as a Court, its record is intolerable. Its best friends, the writer among this number, can only hope that it will confine itself in future to strictly scientific labors, and resign the functions of a judicial regulator to a new and now necessary organization. This new Body is an essential for the welfare of American Medicine. With it there will be speedy and efficient reformation. Without it there must be early and inevitable ruin. The good men of the profession must originate and organize it. Let each one give his method and his views.

## EDITORIAL BREVITIES.

The excellent article on Hypodermic Medication, in the June number, was contributed by Dr. Wm. A. Greene, of Americus, Ga.———To Dr. Edwin Warren, of Baltimore, Md., and not to Dr. A. Hermann Smith, belongs the credit of having first used elastic extension in the treatment of stumps———Since the enlargement of the "American Journal of Obstetrics and Diseases of Women and Children," the cost of the work has been increased to $5 per annum; those subscribihg for it through

this office can obtain it for $4 per annum.———One of the gross frauds being perpetrated upon the public at the present time is that through the advertisement of the proprietors of the Craig Microscope; this instrument is being extensively advertised as magnifying 10,000 times; its real power is about 100. Such efforts to swindle the public cannot be too severely condemned. ———The American Medical Association was termed by the San Francisco papers "a congregation of impracticable old fogies."———A dinner was given before his exposure recently (May 28th) to Dr. D. W. Yandell, by his friends. The affair was originated and gotten up in the usual way, and the correspondence, of course, published. As a piece of ingenious Charlatanism and self-advertising, his "acceptance" was the most remarkable ever emanating from one claiming to be a respectable physician. He alludes to the dinner as a compliment paid him, "*the recipient of the most distinguished honor within the gift of the Medical Profession of the United States,*" etc. The effect upon the minds of the masses was, of course, all that it was intended to be; producing all of the gossip, comment, wonder, congratulations, and profit anticipated. As a piece of advertising, it far surpasses the best efforts of those illustrious gentlemen whose imposing "likeness is to be found on each label"; whose historic "autograph accompanies each bottle"; and whose classic "name is always conspicuously blown in the glass." Among those tendering the dinner, there was not a single physician.———Dr. Richard Cowling, of this city, has been elected to the position of adjunct Professor of Surgery in the Medical Department of the University of Louisville. The well-known effort to prevent this election proved to be ludicrously abortive—a laughable and humiliating episode.

THE RICHMOND AND LOUISVILLE

# MEDICAL JOURNAL.

VOL. XII. AUGUST, 1871. No. 2.

## ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—ON STIMULANT NARCOTICS. By SAMUEL HENRY DICKSON, M. D., LL.D., Professor of the Institutes of Medicine in the Jefferson Medical College, Philadelphia, Pa.

Moralists and Hygienists, Philosophers, Legislators, and Theologians, have exhausted themselves in efforts to put down among civilized and Christian men the use of narcotics, especially when at the same time they are intoxicating agents. In their denunciations many have included tobacco, and some strike also at tea and coffee. With infinitely better reason, others have made war exclusively upon those stimulant narcotics whose direct effect is psychical as well as physical; inebriation, mental derangement as well as poisoning. But their assaults, highly deserving as they are of success, have hitherto proved unavailing. "Man, being reasonable, will get drunk," as Byron sings, and having once got drunk, will, for some cause inherent in his constitution, eagerly desire to repeat the experiment again and again until it becomes a habit, as strong as, or perhaps even stronger than any other habit known to us. "Habit is a second nature," according to the old saw; the

Duke of Wellington "put it stronger," but still truly, when he said "Habit is ten times nature;" it does indeed often generate propensities far more irresistible than any of the instincts born with us.

Little need be said of the familiar form of administration of stimulant narcotics, the alcoholic. It is the very type of its class. It is difficult to define a stimulant, but if to excite, arouse, set in vehement action both mind and body be to stimulate, then we have here this power manifested in the highest degree. Nor can narcotism, stupefaction, collapse both of body and mind be brought on by any other poison with greater certainty or intensity. The literature of this favorite topic, once pronounced to be a "camel-load," would now be a full cargo for a "Great Eastern," and embarrass one of Baldwin's locomotives on an ascending grade. Notwithstanding the varied and extensive usefulness of alcohol, not to speak of its pleasure-giving capabilities, we might almost regret that its distillation was ever hit upon. We might be tempted to take up his parable and pronounce with good old Haller that "Fermented liquors may be beverages, "but distilled liquors are poisons."

At any rate, wines and beers, supplemented by Cider and Perry, and the ancient Mead and Metheglin, if we could be content with them, would be far safer than whiskey, brandy, and their too seducing congeners. Let us foster their abundant manufacture, and urge their claims when unadulterated as substitutes for the fiery and truculent mixtures now to be had in such profuse amount and such infinite diversity of composition and flavor.

The effects of stimulant narcotics are complicated, and deserve careful analysis. It is not simply as stimulants that men in general seek after and crave the numerous narcotics used. At first they exhilarate, raise depressed spirits, promote cheerfulness and alacrity of mind and body; next they disorder the functions, flush the face, quicken the pulse, stir up the passions, and take away the power of self-control; further on, they tend to impair the sensibility, gradually removing discomfort and

relieving pain and analgesics, veiling the memories of care and sorrow; and lastly, they act as anæsthetics, and inflict stupefaction, relaxation and collapse, coma and death.

A very slight examination of the properties of each of them separately will show how greatly they differ in the proportion of the varied effects above indicated.

Wines exhilarate promptly and notably; beers much less in comparison. These latter pass readily on to the fourth stage, with little intermediate influence, and produce a sort of stolidity and impassiveness, a quasi stupor; but they stop there, and rarely run into collapse. Wines, especially the sparkling, are transient in their effect, and are so far safe that, when pure, it requires a large quantity to carry the subject beyond the second stage. The least fiery, champagne, the Rhenish, clarets and santemes, may be so leisurely taken as to protract the first agreeable feeling of exhilaration when the subject enjoys any firmness of character or force of will. Hence wine-growing countries which consume their own products are comparatively temperate. I am glad that our own wide domains seem specially fitted for the culture and manufacture of these light wines: The Catawba of the West, the Hocks of California, and the Scuppernong Riparian of Florida, deserve encouragement, and will by and bye be abundant and cheap enough, as they are already good enough, to do away the wish for stronger drinks.

But, unhappily, in a large class of cases this exhilaration, so pleasant, and in comparison so innocent an enjoyment, soon ceases to be the condition aimed at or wished for. Destined to fall, the intemperate man abandons wine and beer, if indeed he had ever been satisfied with their moderate and qualified effect, and seeks a less tardy route through the second to the third stage, which he would gladly rest in and render permanent indeed if it were possible. He drowns care and remorse, and forgets pain and sorrow; but these immunities are purchased at an immense and ruinous price, and in his progress through the stage of excitement and uncontrollable passion, with the terrible risk of injury and destruction to all his surroundings,

to himself personally, and to all who are dear to or valued and held in esteem by him. The collapse into which he plunges finally is at first productive of immense suffering as a consequence, but this suffering, Nature's warning and protective rebound, soon fails to recur, or rather is supplanted by another and more intolerable form of suffering, the result of an intense craving for the renewal of the narcotism.

Wherever men exist they delight in a temporary suspension of conscious being. Sleep, which takes up one-third of our lives, is eulogized everywhere "by saint, by savage, and by sage," by poet and philosopher, the toil-worn laborer and the idle Turk, by Shakspeare, Young, and Sancho Panza alike, as a happy and enviable condition. Active life is a ceaseless struggle for the mass; a state of endurance rather than enjoyment; a battle fought with the certainty of final defeat; a burden of oppressive care interspersed with wearisome grief and pain, and anxieties proportioned very generally to the intelligence of the subject. Therefore it is that on emerging from the lowest animal savagism, each tribe seems to avail itself of such stimulant narcotics within their reach as will intoxicate and stupify them, and which they have discovered by whatever accident. They avail themselves eagerly of these properties wherever they find them, and barter all their valuables to obtain access to them. Kennan tells us that he has known twenty dollars' worth of furs given among the Korak Indians for a single mushroom—the amanita, which they call muck-a-moor, to get drunk on. We, all of us, know that similar madness is common in our highest civilization.

The requisite qualities sought for and appropriated by this strong instinct are, unhappily, bound together in an eminent degree in alcohol, which, from its universal presence, can be procured more conveniently and cheaply than any other, and seems readily to supplant all others when introduced and offered. I greatly fear, too, that there is some obscure elective affinity which will always make it the chosen poison of certain tribes, races, and nations, who prefer and riot in it with an

excess of eagerness, apparently in direct ratio with their susceptibility to its injurious influences. This is particularly true of the Indian and the negro, both of whom it rapidly consumes and destroys.

At the present day, however, there are millions who do not know it at all. May they never come to such knowledge of evil! but who satisfy this urgent craving of humanity, the desire of anæsthesia, insensibility, temporary oblivion, suspension of annoyance mental and bodily, with other drugs within their reach; other agents similarly efficacious and productive of vastly less risk to themselves, and of danger and injury to those about them.

All men, everywhere, I repeat, as all love sleep, desire and seek after a suspension of conscious life which resembles sleep. It is an instinctive propensity which will and must be gratified, and which cannot be suppressed or extinguished. It is conceded by physicians that the excessive force of this propensity which we call intemperance is truly a disease; it follows, therefore, that we must treat it upon received and rational methods. "The great therapeutic principle of *substitution*," says the lamented Trousseau, rules at present supreme in medical practice." Let us apply it here. Of all the forms of intemperance, it will be at once admitted that alcoholic drunkenness is the very worst. The opium-eater may be stolid, useless, burdensome, wretched; but he is harmless, and wraps himself quietly up in his dreams. The Kawa chewer and drinker sits passive and imbecile, and suffers, Job-like, in his own person nothing but the infliction of cutaneous disease. Haschich sometimes maddens its victim, but its general influence is cheerful, maudlin stupefaction, or mere uncontrollable restlessness. But the alcoholic drunkard is always "voluntarius demon." All that is good in human nature is abolished; all that is evil intensified in him; cruel, reckless, a wife-beater, a homicide, foul, in his person and disgusting in his language and habits, suicidal of health and of reputation, he is an intolerable nuisance from which his death alone can relieve us. For the ex-

perience of ages has taught us that the factitious propensity, the artificial instinct of which he is the victim, is not only most intense, but most tenacious, and intractable. Our efforts at his cure have failed; chiefly, I think, because we have insisted upon his abstinence and reform; efforts of which he is incapable. Let us try Trosseau's method of substitution, and offer him alternatives, varied methods of gratification and relief. The ingenuity which dresses up his familiar poison with so many agreeable additions of flavor and odor will surely avail us in presenting him with safer draughts of the juice of the poppy, the resin from the Indian hemp used even in their sweetmeats by the Hindoos, the amanita muscaria, the kawa or piper methisticum, and the coca of Bolivia and Peru.

If physicians will prescribe these formulæ freely, frankly and openly, druggists will soon find their profit in preparing them; and I will venture the prophecy that the first cabaret or restaurant in which such variety of enticing beverages is made agreeable to the palate and convenient to general use, will accumulate a rapid fortune. A gentleman long resident at Cairo, in Egypt, told me that it was common in their clubs, excursions, pic-nics, etc., for each one to take with him his favorite tipple; and that it was generally agreed, all things considered, that the votaries of haschich came off best, both as to the current enjoyment and the physical state next day. We are told that Sir Humphrey Davy was in the habit of indulging his intimate friends with a few breaths of nitrous oxyd gas as a change from the accustomed hospitality of a glass of wine or liqueur. A Tartar gentleman with the same feeling will offer you "a slice of mushroom," and when festively inclined will treat his retainers, nay, a whole village, with the potential material of the plant eliminated through his kidneys, and in this way retaining its efficiency through more than one set of conducting tubes.

An undue dread of opinion hinders greatly the beneficial substitution of this drug of which Collingwood and others inform us that a very extensive employment spreads all over the East in a moderate and temperate degree, doing no more harm

than the temperate use of wine and beer in Europe. There can be no question that a similar habit is growing in our own country silently; nor can I bring myself to regret it, when I think of it as a most effective safety-valve and relief from alcoholic intemperance. We make horrible pictures for ourselves, and shudder at them, of opium-smoking, as in Edwin Drood, but we stop at the contemplation of the wretched state of the individual. How much the community is the gainer by his quiet stupefaction compared with the mad, demoniac fury of the whiskey drinker, it would indeed be difficult to estimate. We are profoundly affected by the confessions and suspiria of De Quincy; let us imagine him taking a corresponding amount daily of brandy, and we should never have had a volume of such admirable though prosy essays upon all subjects of literature and philosophy. We owe them every one to opium. And the unequalled eloquence of Robert Hall was probably poured out from the same source to which indeed he was indebted for the solace of a most painful life of disease and infirmity; as we are informed by his biographer that he took from 1,000 to 3,000 drops of laudanum in a day.

Among the stimulant narcotics we may class some articles that are not properly intoxicating in the sense of inebriation or drunkenness, their effects being physical, and not *psychical*. Tea, coffee, and tobacco have come into general use from an early period, as affording to half-civilized peoples the *enjoyment derived from any strong impression* on the senses, no matter how disagreeable at first. Their soothing, gentle narcotism, an unconscious action upon the nervous system riveted their hold, and now they have spread their influence over the whole habitable globe. The distinct propensity which I have alluded to shows itself in the universal employment of all procurable condiments, salt, pepper, onions, garlic, mustard, etc. The first of these is apt to be spoken of indeed as a necessary of life. It is almost everywhere attainable, and wherever it is scarce, it is most highly prized. One exception alone is recorded. Petherick, in his "Travels in Africa," says of the Dinka tribe on

the White Nile: "Salt they have none, and when I have offered it to them, they have invariably repudiated it, disliking its taste." This is the only example I have ever met with in my reading of any people, however wild or savage, refusing it. All animals seek it eagerly, and seem to enjoy it and benefit from its administration.

The whole class of bitters have been made use of as beverages, merely I suppose because of their strong impression on the gustatory nerves; Cullen, however, ranks them all as narcotic. Some of them are decidedly so, as hops and wormwood mingled in ales, beer, and absynthe.

Tea and coffee find a place under the same category, but we take them too much diluted generally to obtain any marked influence from them. They cheer, certainly, as Cowper writes; but they do not inebriate. I have no doubt that even the comparatively inefficient use we make of them silently tends to the gratification of our instinctive propensity, and thus they save thousands (unconscious of the benefit) from the temptation to intemperance This view is clearly taken by Lecky in his "History of European Morals." "The introduction of hot drinks was the beginning of a great social change. Coffee-houses became the most important centres of society, and gave a new tone to national manners. The effect of hot drinks upon domestic life was probably greater in England than on the continent. Checking the boisterous revels that had once been universal, and raising woman to a new position in the domestic circle, they have contributed very largely to refine manners, to introduce a new order of tastes, and to soften and improve the character of men." Coffee, doubtless, assists the Turk in his obedience to his Koran; and tea might have fixed the "heathen Chinee" in his time-honored and sober semi-civilization, but for the forcible intrusion by the English, of opium and other foreign narcotics upon him, in spite of his sullen and unavailing repugnance.

It is rare, I think, to find a drunkard developed where there has been a notable fondness for either tea or coffee. Thus also, the yer-

bamaté serves the South American as a protective; the Polynesian is thus benefitted by his kava; and the Peruvian by his coca. None of them, however, plays so important a part in this relation as tobacco, which indeed merits to be treated of separately. Its history is very strange and full of seeming incongruities Poisonous even in small doses, it is nevertheless, so much in harmony with the human constitution, that there are few who cannot educate themselves into absolute fondness for it, and some resort to it early and at once with pleasure. There is no single substance in such familiar and universal use all over the world. We may note some differences as it affects different races. The great majority of Caucasians must go through a hard initiation when learning to smoke it, and nothing in human history affords so strong an illustration of the force of social sympathy, the animal tendency to imitation, and the ready sacrifice of the present to the future, as the conduct of the simple youths, who offer themselves annually as recruits to the grand army of smokers. But of the Australians, Scherzer tells us that "it is no unusual thing to see the infant in arms take the short 'cuttie' pipe coolly out of its mother's mouth, and begin to smoke it." The Anglo-American almost invariably spits largely when he chews or smokes; a few exceptions occur but they are rare. One of my friends kept his mouth always full of tobacco, whenever he was not eating, or drinking, or brushing his teeth. He lived to a good old age, though a martyr to gout; but he must have swallowed a prodigious amount of nicotin; for his last act in going to bed was, uniformly to take a fresh quid of proper size; after which he was in the habit of waking once or twice during the night to change it as in the day.

In one of our recent journals, a report is given of the reading to a County Medical Society of an essay upon this plant, in which the author estimated its consumption in this country at the rate of seven and a half pounds per annum for every man, woman, and child. He regards it as but slightly narcotic, because it renders some persons wakeful; but there is no necessary connection between narcotism and hypnotism. Hydrate of

chloral, the most direct and trustworthy hypnotic known to us, is hardly narcotic at all, and poisonous we know not how, but only in very large doses. One of the members of the Society mentioned "a dock-yard laborer in England, who *eat* tobacco, and made his meals on it (see "Med. Times," March 15th, 1871) without any injurious effect." Among us, the original uneducated tolerance of tobacco is an idiosyncrasy, like that which enables some men to go to sea with impunity, while the majority must pass through a harsh, nauseating process, before they can endure the motion of a ship. We have all witnessed the agonies of a tyro, manipulating his first pipe or cigar—his paleness, cold sweat, vertigo, nausea, and vomiting, with intolerable cramps and spasms. Many smokers and chewers undergo a renewal of their tortures, whenever by chance or misfortune, they swallow even a small amount of the saliva which they habitually eject. Some *dry* smokers were spoken of in the Society, and the English laborer was considered a very extraordinary case. But we are told by Capt. Wilkes, of the Exploring Squadron and of Trent-seizure memory, that the natives of Drummond's Island in the North Seas—probably of Malay origin—are "so extravagantly fond of tobacco and so eager after it, that when one had put a piece into his mouth, others would seize him and actually force it out with their fingers." "They are truly disgusting," he continues, "for they *eat* and *swallow* it with a zest and pleasure indescribable. Their whole mind seems bent upon obtaining this luxury." (Vol. v., p. 62.)

In his "Wild Sports of India," Capt. Shakspeare, of the British Army, writing of tobacco as a febrifuge, says:. "No sportsman here (Ko-koor Ghaut, Neilgherries) should be without it. These wild men of the jungles will eat an incredible quantity of it; not merely chewing and spitting out the quid, but allowing it to pass into the stomach, enough at one time to poison half a dozen men, who were not used to it. My own Shikarrees used to eat a good deal, instead of smoking it," (p. 158.)

The ordinary effect of tobacco is to diminish sensibility and

sensitiveness, lower the pulse, and soothe and calm the mind; an approach to that happy negative condition of the living organism, which the Turk knows and enjoys as "Kief," the product of his coffee and narghilé; and the Buddhist earnestly covets and seeks as "Nirvanna." I have never known it to inebriate, but Whymper ascribes to it a direct intoxicating power. Among the natives of Alaska and that Northern region it is lavishly used. "The true 'Tchutktchi' mode of smoking," he tells us, "is to swallow all the fumes of the tobacco; and I have seen them, after six or eight pulls at the pipe, fall back completely intoxicated for the time being," (p. 114.) We could wish that he had indulged us with some details of the symptoms of this nicotian drunkenness.

We may clearly comprehend the intensity of desire, arising from indulgence in narcotics, even when of no inviting taste or flavor and when of foreign origin, by the anxiety to obtain tobacco when its subjects have been deprived of it.

A strong illustration of this is given in the "Edinburg Review" for July, 1849: "The desire of obtaining tobacco in Van Dieman's Land (then a penal British station) led not only to great irregularities and an enormous amount of punishment, but to the commission of the most dreadful crimes. The temptation to indulge in it was so great as altogether to overpower the fear of punishment. By acting upon this vehement propensity, the amount of work obtained from the convicts at Norfolk Island was increased from one-third to one-half, and even doubled. It has the very best effects on discipline; the men are active and diligent all day, remaining as long as the overseers will permit, and returning to the station by moonlight without a grumble."

I acknowledge my total inabiliiy to explain the insusceptibility to the poisonous action of this dangerous drug above recorded. Idiosyncracies explain degrees of tolerance, but the statements go far beyond this. Such diversity of degree of effect as almost to change the nature of the impression made, we find in certain of the more properly stimulant narcotics.

Some subjects collapse and die at once under chloroform; some are incapable of any other effect from ether than its exciting and maddening action. In nitrous oxyd or the exhilarating gas, we see the most singularly contrasted results of administration. Davy offers it to his friends and visitors as a mirth-inspiring cordial; the young members of college classes and public audiences at an exhibition, are indulged with a few whiffs of it, and are aroused to furious pugnacity, equally furious love-making, or break out with lofty declamation, or shouts of laughter and cries of delight; while the dentist, on the other hand, in a brief minute or two with the same inhalation, reduces his victim to absolute insensibility, and works his will upon him with entire and most passive acquiescence. Another unfortunate tendency exhibited by it exceptionally and in but a few instances, however, is the prompt induction of collapse and prostration, painful to witness, and slow to recover from.

I cannot but wonder that commercial enterprise has not yet introduced among us the betel nut and the coca, to offer variety and novelty to the chewers of tobacco, and a substituted pleasure to those who shrink from the taste and odor of the familiar weed The betel or areca nut, sprinkled with a little chalk and enveloped in a green aromatic betel leaf, sometimes with the addition of catechu or the cajeput resin, constitutes the delight of millions of Hindoos and other Easterns, among whom it has been in use from the earliest times. If we ask what is the inducement, the temptation to betel chewing, we are furnished with an ample reply, quoted by Scherzer from a Sanskrit poem, Hytopedesa: "Betel is pungent, bitter, aromatic, sweet, alkaline, astringent, a carminative, a dispeller of phlegm, a vermifuge, a sweetener of the breath, an ornament of the mouth, a remover of impurities, and a kindler of the flame of love. Oh, friend!" exclaims the enthusiastic eulogist, "these thirteen properties of betel are hardly to be met with, even in Heaven."

But there seems no unfamiliar article of the character of narcotic so worthy of our attention and so well deserving of introduction, both into our materia alimentaria and materia med-

ica, as coca erythroxylon; that is, if the half be true which is reported of it by the high authorities, Markham, Tschudy, and Campbell. It is chewed in the leaf, or drank as a tea. It is powerfully stimulant, nor can we doubt its being marvellously nutritious. All narcotics act as "sawing-boxes," to use the odd phrase of a modern writer. They retard the wear and waste of the body by checking the metamorphosis and melting down of tissues, etc., in performance of function. Anstie, Todd, and others believe that alcohol is good also, but this is much disputed.

Mr. Campbell tells us that an Aymara Indian travelled with him ninety miles in one day, Mr. C, riding a mule. He kept up easily, without other refreshment than a few grains of roasted maize, with chalk mingled with coca leaves, which he chewed incessantly. Again he took a native from La Paz to Tacna, 249 miles, which he did in four days; resting one day at Tacna the fellow set off on his return, crossing a mountain pass 13,000 feet high. Throughout this enormous pedestrian journey, he took no other sustenance than a little roasted maize and coca leaves. Similar stories are told by the other authors referred to. They tell us that the coca-makers, the Indian tribes of Peru and Bolivia, are more capable of continuous hard work. Nor does the moderate use of it injure the health. It does not inebriate, nor produce consequent depression. The daily consumption of the leaf is two or three ounces. Tea made from it is anti-hypnotic, soothing and invigorating. Many coca-chewers attain a great age. In Peru the government fosters its production, allowing it to be grown free of charge. In Bolivia the taxes show its enormous cultivation as reaching 1,200,000 pounds, or as we find it elsewhere, 78,000 tons. The Germans have extracted from it a peculiar crystalized organic base cocaine, which has been resolved into benzoic acid and a new organic base ecgonin. Another element has been found in it which they name hygrin.

The new route by the Suez Canal into the Red Sea may bring us another desirable narcotic, which Palgrave mentions in his

travels: "Its seeds," he says, "pounded and taken in small doses, produce effects much like those of Sir Humphrey Davy's laughing gas. The patient dances, sings, and performs a thousand extravagancies, then falls asleep, and on waking has not a memory of what he has been doing or saying. Its operation is laughable enough, but very harmless."

Lastly, I shall ask if anything is known to my professional brethren of a plant, described by the great traveller, Capt. Burton, in his "City of the Saints." He calls it the Peioke or Whiskey Root—"a kind of cactus which grows in Southern Texas, on the sand-hills of the Rio Grande. The Indians eat it for its exhilarating effect on the system, producing the same excitement as alcoholic drinks. It is sliced as you would a cucumber, the small pieces chewed and swallowed; and in about the same time as comfortably tight cock-tails would stir the divinity within you, this indicates its effect, only giving a somewhat wider scope to the imagination and actions."

All my inquiries have failed to elicit any information concerning any such Southern cactus. Besides this it seems truly strange that the Indian, characteristically and strongly fascinated by the 'fire-water,' whose effects so vehemently desired, he could readily obtain, without toil or cost from this wild plant, should not have given his entire energies of soul and body to procure it, and thus destroy himself, without the ruinously expensive and exacting aid of his kind friends, the pale-faces.

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ART. II.—FALSE MEMBRANES IN CROUP—IS THEIR SOLUTION IN THE TRACHEA AND BRONCHI A PRACTICABLE MEASURE? WITH THE HISTORY OF A CASE ILLUSTRATING THE PRACTICE. By Wm. H. DOUGHTY, M. D., Professor of Materia Medica and Therapeutics in the Medical College of Georgia.

In the December number of this Journal for 1868, we published an article on a kindred subject, namely: "An Acidulated Solution of Pepsin as a Solvent for False Membrane in

Diphtheria," giving also the details of a case demonstrating the power of this agent to dissolve the membrane, and thus deprive that disease of at least one element of its danger. Assuming that the result in that case afforded a clear demonstration of the possession of an actual solvent for such adventitious structures, we have never doubted its successful employment in true croup, provided the inaccessibility of the part did not defeat the effort —a point which could only be determined by actual experiment.

The employment of this agent for such an object at that time, was prompted by a dire emergency in practice, which required an effort in a new direction, if anything could be done to save the patient from suffocation. Led by reflections upon physiological chemistry, particularly the chemistry of digestion, we devised the artificial gastric juice, as the therapeutic substance properly adapted to the end in view. We then thought and still claim, that aside from the attempt at the *destruction* of the membrane by means of caustics (or its prevention by their application to the inflamed surface, after mechanical removal), and the empirical resort to turpentine, alkalies and like remedies, not known to possess the power of promoting its disappearance, this was the first direct effort to dissolve it by a chemical solvent proper. To treat the inflammation, and possibly in this way anticipate or supersede the deposit; or failing in this, both in diphtheria and croup, it was the policy of the profession to facilitate its early spontaneous or forcible separation by the use of emetics, warm vapor inhalations, etc.* Shortly thereafter, our attention was directed to the experiments of Brichetau and Adrian, on the "Solubility of False Membranes" in lactic acid and other agents, published for the first time in this country, in the October No. for 1868, of the "American Journal of Medical Sciences."

* For the proof of this statement it is only necessary to refer Flint's Practice, edition, 1866; Aitkin's Science and Practice of Medicine, edition, 1866; Hillier, Diseases of Children, edition, 1868; Steine, of Prague—Art.: Tracheotomy in Croup; American Journal of Obstetrics, February No., 1871; Niemeyer; and others equally familiar.

Brief as was this notice of these experiments, we hailed them with delight, because of the certain confirmation that they gave to a mode of treatment, that promised more than any other appropriate measures hitherto devised for the management of a local pathological condition confessedly unmanageable. While these gentlemen were pursuing their experiments in the laboratory of the true chemist, whence emanates so many useful suggestions to the therapeutist, we were forced to make the *first experiment upon the living subject.* The subsequent experience of Weber, of Darmstadt, ("Med. Times and Gazette," Jan. 22, 1870) brought it into more extended notice, and justifies the expectation that it will not merely simplify, but revolutionize the medical and surgical treatment of croup. Indeed, so great is the measure of success up to this time, according to this observer, the occasion for the performance of tracheotomy has been greatly diminished by the satisfactory use of a direct solvent. He says: "At first he used it (lactic acid) only after the operation of tracheotomy, partly with a view to keep the tracheotomy tube clean, and partly hoping that the lactic acid might affect the membranes which extended down into the bronchi. *The results were so favorable in both respects, that he proceeded to try it in severe cases of croup before having recourse to tracheotomy. Since then he has not once had occasion to operate, and has not lost a single case of croup.* In some very severe cases, in which inspiration and expiration were equally obstructed, and the condition of the fauces indicated an abundant fibrinous exudation in the trachea, the difficulty of breathing was completely relieved within seven to ten hours of using this remedy, and two or three days after no trace of the local affection remained." ("Med. News and Library," April, 1870, from "Med. Times and Gazette," January 22d, 1870.) The italics are our own.

The question forming part of the title of this article is fully answered then in the affirmative: *It is practicable* to dissolve membranous formations in the trachea and bronchial tubes. Little has been done by way of contribution to the develop-

ment of this practice by American physicians. Perhaps this is attributable to the want of credibility of home-writers or to the natural obsequiousness that obtains towards foreigners prompting the profession on this side of the Atlantic to accept for trial that alone which is first sifted and established by European skill. We are a constant reader of the leading periodicals of this country, and if they have contained anything upon the subject beyond a few extracts from foreign journals, it has escaped us. More than two years ago we invoked careful experimentation by observers in the large cities North and West, where diphtheria and croup cannot be considered as rare and with what result we have just stated. Both diphtheria and croup are rare diseases in this section; we therefore entertained little hope of doing more toward the elucidation of the subject. The subjoined case presented the earliest opportunity; it is given to the public with the hope that others may be induced to adopt a measure which certainly offers the prospect of more certain results than the heretofore indirect ones, including even that dernier resort—tracheotomy.

Up to the present time the evidence is in favor of lactic acid, as the most rapid and active solvent for false membrane, but there is some difficulty in using it with children, on account of its irritant effects upon the unprotected eyes and face. It becomes necessary to shield the face from the spray of the atomized fluid, a proceeding which the natural timidity of children prompts them to resist. We were only prepared for the use of the pepsin (on this occasion) which is certainly less active than the other, although having the advantage of perfect harmlessness in its local effect upon all parts. When lactic acid is employed, Weber's directions are ample. "The patient is made to inhale a solution of lactic acid (15 to 20 drops in half an ounce of water) at first every half hour, and afterwards, when the respiration improves, every hour or two hours a solution of 10 to 15 drops in half an ounce of water," measures being also taken to protect the face and eyes.

It is well, perhaps, to caution members of the profession not

to expect hurried action from this class of remedies; the conditions and manner of use necessitates a period of time varying from seven or eight to twenty-four hours, during which it can scarcely be apprehended that the fibrinous substance will be so early and regularly discharged by expectoration, that by the time the inhalation ceases the air-passages will have been thoroughly cleared of the obstructing mass. In other words, as its dissolution progresses it may not be immediately removed; it may still occupy the tubes or channels of respiration, failing of expectoration from other, perhaps, incidental circumstances. The blunted sensibilities of the nervous system of a partially asphyxiated patient we need only mention, as one of the contingent elements promotive of this result. The time when and the rapidity with which it is discharged will vary with the condition and extent of the exudation as well as the efficiency with which the application is made. Presuming that the membrane has the same density throughout, and is equally accessible at all parts, it might be expected to give way about the same time, its removal by expectoration occupying but a short time, and that at the end of the inhalation—period proper. This occurred in the case reported below, after using the pepsin solution twenty-seven hours intermittently (equivalent to about seven hours continually), very little expectoration having taken place, and then suddenly flooding the air-passages with warm vapor, so as to promote abundant expectoration, the digested, pulpified morbid product was brought away in great quantities to the sensible relief of the burdened organs and the danger of the case. It is well to observe in this instance that this was accompanied with the discharge, not of opaque, concrete mucus, such as usually chacterizes sputa retained that length of time, but of immense quantities of fresh tenacious mucus, which, for several days, was mixed with blood in the form of hæmorrhagic spots from the irritated surface now free from the morbid investment.

Much will depend upon the density of the membrane. Rokitansky remarks that "the exudations present great differences

in thicknesss and consistence; the membrane sometimes resembling an investment of hoar-frost or gauze, whilst at other times it will even exceed a line in thickness, while the consistence may vary from that of viscid cream to that of the most compact, tough, leathery, coagulated fibrine. But neither the density nor the consistence is generally uniform throughout; the exudation, as a rule, becomes thinner and gradually softer towards its edges, more puriform or creamy, and the portion in contact with the mucous membrane is the softer or looser of the two."

"They either adhere firmly to the mucous membrane or hang loosely on it; the latter being the case when a viscid secretion occurs between the false membrane and the mucous surface. The surface next to the mucous membrane is frequently marked with red streaks and clots, consisting in part of blood adhering to the surface, and in part, as found on closer examination, of straight or tortuous vessels, or of small, roundish extravasations, from which currents of blood are seen to emerge in an arborescent and radiating form. The appearance of the subjacent mucous membrane is liable to considerable differences; its red color sometimes assumes a very dark, almost brown tint, but more frequently a bright, erysipelatous hue; and again it occasionally, but very rarely, happens that all the signs of injection are absent; it presents an appearance of sores, as if it were excoriated, bleeds from numerous, minute, scattered spots, and presents various degrees of swelling," (page 29, vol. iv., Rokitansky, Path. Anatomy).

How much protection against the action of the solvents would be afforded by the pseudo-*living* state of this membrane maintained by sensible vascular connection with the part beneath, in some instances, at least, we are not prepared to appreciate, but aside from this, we repeat that the density, superficial extent, and firmness of adhesion to the subjacent structure serve to render very variable the length of time necessary for its solution. Occasionally, when unusually tough, not only a prolongation of time would be necessary, but not until the

essential integrity of the entire mass of the morbid structure had been impaired would its discharge by expectoration commence. In most cases some idea may be formed of the precise character in these particulars of the membrane by specimens occupying the fauces, but in those exceptional ones, where it is confined to the larynx, trachea, and bronchial tubes, no guide is offered. The French authors deny the *membranous* character when the pharynx becomes not a seat of deposit also; in the case reported, anxious for an open declaration of the true nature of the attack, we examined the throat carefully daily. We were driven to the conclusion that a membrane did exist by the increasing gravity of the situation, the correctness of which was demonstrated by its subsequent expulsion. The visible presence of the fibrinous exudation either before or after removal, we recognize as the one and only unfailing element in the diagnosis. In the absence of this sure criterion, inflammatory croups not of a membranous character are often classified as exudative. Autopsies have corrected the diagnosis in some instances by disclosing the utter absence of any such foreign concrete plasma. For the first few days we directed our measures to the relief of the acute inflammatory catarrh, but by the urgency of the respiratory distress, were forced to conclude that a membrane had formed, and we refer to this again only to allude to the practical question which lies at its foundation—namely, does membranous croup commence as such, or is the fibrinous form simply assumed or engrafted upon the inflammatory attack at a later period in its progress? We have thought that they were oftener, though not always, fibrinous from the beginning, although it is of the highest importance to keep prominently before the profession the opinion of that eminent pathologist, Virchow, upon this subject. On page 408, of his work of pathological innovation (*Cellular Pathology*) he says: "*In a great number of cases fibrinous inflammations unmistakably arise as an aggravation out of mucous ones.*" It is known that he rejects the hypothesis that the membrane is formed by the simple transudation of plasma from the blood,

and avers that both the hyperinotic state of the blood (fibrinous crasis) and the local membranous formation are the common product of the lymphatics of the part involved; the fibrinous membrane being, in his own language, the surplus of the fibrine formed *in loco*, for the removal of which the lymphatic circulation did not suffice (page 198). The fibrinous crasis under this interpretation is of local origin, and not assignable to a phlogistic state of the blood, as ordinarily spoken of. The therapeutist in the act of treating disease necessarily passes judgment upon the prevalent views of pathologists; the clinical study of disease and the results of treatment tend to confirm or set them aside. The subjoined case, we think, confirms the position of Virchow, inasmuch as the membrane, in all probability, was developed upon an aggravated catarrh of the mucous membrane. He does not attempt to point out in what the *aggravation* of the mucous inflammation proper to the formation of a membrane consists—knows nothing of its essential quality as compared with ordinary inflammations, but if any practical result is to flow from this doctrine, it is that the practitioner must early endeavor to subdue the local inflammation, upon the continuance and aggravation of which the fibrinous formation is contingent. When there is strong reason to apprehend the change of the simple inflammatory into the mechanical form, then also even the prophylactic use of harmless solvents becomes indicated. "If we can dissolve the membrane after its formation, may we not more surely arrest its concretion? Prevent its deposition?"

We were called January 11th, at 2 o'clock, to visit B. W., aged nine years; a child of good general health, but subject to chronic enlargement of the tonsils, not often requiring attention, but sufficient to modify somewhat his speech.

Has been sick since Sunday night (8th inst.) with hoarseness, an irritable croupal cough, and fever, for which sundry domestic remedies have been prescribed without effect.

His present condition is as follows: Has decided fever; throat externally is much swollen (from ear to ear); the fauces

are the seat of a diffused redness, with slight enlargement of the tonsils, with an abundance of mucus, but no *membrane* visible. Is so hoarse that the voice is reduced to a whisper; *stridulous*, obstructed breathing marked and continuous. Physical examination of the chest reveals nothing beside this laryngo-tracheal modification of the respiration, save the abundant collection of mucus in the bronchial tubes, such as characterize diffuse bronchitis.

Stomach and bowels in good condition; kidneys secreting freely; no eruption on the skin, and neither scarlatina nor diphtheria prevalent in the neighborhood. The attack assumes the character of an acute inflammatory catarrh, the larynx being chiefly involved; in other words, *inflammatory croup* with catarrh of other portions of the respiratory tract.

*Treatment.*—Apply tar poultices to the throat continuously; warm hip-baths every six or eight hours; 5 grains quinine, with 3 drops tincture opium by enema, to be repeated in two hours. Cough mixture containing 3 grains carb. potash to ℥ i. syrup of gum Arabic every 2 or 3 hours. Inhalation of atomized solution of chlorate of potash 15 minutes of every hour (day and night); and the vapor of boiling water to be inhaled five or six times daily, by placing the kettle under the bed-clothes. An occasional emetic of powdered alum in syrup of ipecac, when greatly embarrassed.

5 o'clock P. M.—Respiration the same, although the complexion is good, showing sufficient æration of blood to prevent suffocation or *cerebral* trouble. Mind is clear; places his fingers upon the larynx when asked as to pain or distress; feels that the obstacle to his well-being is there; fever decided but pulse not very frequent; has been vomited since my morning visit; has retained the quinine enemata; no membrane visible in the throat.

Treatment continued. The quinine to be repeated early in the morning.

January 12th, 9 A. M.—His condition is essentially the same; respiration same in character and intensity; thought to be do-

ing well, perhaps because no worse. Has been vomited twice during the night, discharging much stringy mucus, without manifest relief to the breathing; treatment has been strictly carried out; is still continued, simply adding five drops of turpentine to every alternate dose of the cough mixture.

5 o'clock P. M.—Condition unmodified; no membrane visible in the throat. Treatment continued.

January 13th, 9 A. M.—Condition the same, except that swelling about the neck and throat has abated, and redness of the fauces no longer present. No membrane is yet visible, however; nothing relieves the distressing, obstructed, stridulous respiration; brain is clear; no material lividity of the face.

*Treatment.*—Stop the tar poultices, now no longer necessary; suspend also the use of the steam; continue the chlorat potash inhalations; cough mixture and baths and emetics occasionally. Diet—broth, milk, tea, and crackers.

5 o'clock P. M.—Condition the same. Applied a small blister to front of chest over the larger bronchi. Continued other treatment.

January 14th, 9 A. M.—Same condition; no relief to respiration; blister drew well; strength of child apparently, not much abated.

*Treatment.*—Continue the several measures advised, giving due attention also to nourishment.

5 o'clock P. M.—Patient worse; is more distressed in breathing; countenance suffused; is very restless; voice is annihilated to the feblest whisper; abdominal respirations highly developed. As far as can be determined, air does not enter the right lung, although dullness on percussion is not present; amid the confusion of discordant laryngeal, tracheal and bronchial rāles, it (air) can be heard to penetrate the left; he lives chiefly by the latter. No membrane visible in the throat, but presuming the almost certain formation of such a structure in the larynx, trachea and right bronchus, we ordered the inhalation of the following *pepsin solution* fifteen minutes in every hour, suspending all other measures except the cough mixture, to which

ten drops spirits of turpentine were added on each occasion, and the nourishment:

℞.—Pepsin (Boudault's) ℈ ij.;
Diluti. Mur. Acid, gtts, v.;
Distilled Water, ℥ iij. M.

Filter, and direct for use.

January 15th, 9 A. M.—Every aspect of the case is worse—breathing, countenance, nervous system; signs of debility show themselves; skin is sweating profusely; is delirious occasionally and disposed to stupor; was vomited again during the night. Treatment continued.

4 o'clock P. M.—Still worse; no expectoration of any consequence to-day; is in danger of suffocation; the power of the whole system is absorbed in the one effort to *breathe*. Treatment continued.

8 o'clock P. M.—Visited the patient again; is no better; ordered the constant inhalation of the vapor of hot water, flooding the subject, as it were, with great volumes directed to the mouth and nostrils. We then retired to prepare for tracheotomy, seeking Prof. H. F. Campbell for that duty.

11 o'clock P. M.—Returned with Prof. Campbell to operate; unexpectedly found the breathing improved somewhat; enough so to encourage the hope of further amelioration; operation postponed for the present; expectoration increased. Continued the inhalation of steam; gave 7½ grains of bromide of potash to quiet restlessness; diet as previously advised.

January 16th, 9 A. M.—Is better; breathing less croupal; countenance less anxious and more intelligent; expectorated broken down pulpy masses, with immense quantities of fresh, clear mucus through the night, which have been preserved for inspection; the former are evidently broken down, shreddy masses of disintegrated membranous exudation; the mucus that envelops it, clear and tenacious; respiration has greatly improved since its removal. Treatment continued.

5 o'clock P. M.—Is doing well, comparatively speaking; continues to discharge the above sputa; although the room is

warm, he says the respired air feels cool to the air passages, provoking a more frequent cough; still has fever, but not very high. Physical examination of chest shows that the air now enters the right lung; more distinctly the left. Treatment continued. The crib in which he sleeps, to be drawn nearer the fire, and the curtains suspended on three sides, so as to afford a warm atmosphere for the sensitive air-tubes. Diet—eggs, soup, milk, and wine whey. He does not refuse to eat.

January 17th, 9 A. M.—Has had a quiet night; slept soundly under one dose of bromide of potash (7½ grs.); respiration greatly relieved; croupal character almost lost; voice slightly more audible; mucus expectoration large, but easy, having here and there specks of red blood in it; has very little fever. On account of the presence of blood in the sputa, examined both lungs carefully; for the first time the vesicular murmur is audible in the lower and lateral portions of the right lung, with mixed bronchial rāles. It is quite clear throughout the left lung. The bloody sputa is not *pneumonic*; the physical signs and symptoms exclude pneumonia, and confirm the supposition that the blood escapes from the air-tubes divested of their epithelium by the detached membranous exudation. Treatment continued.

5 o'clock P. M.—Is very quiet; no fever; intelligent and bright; large mucus expectoration streaked with blood, loose and easily brought up. Treatment the same.

January 18th, 9 A. M.—Is still improving; voice much more distinct; breathing quiet; complexion good; is playful; slept well during the night; no fever; expectoration still mixed with blood (hæmorrhagic spots); takes nourishment freely; bowels and urine all right.

*Physical Signs.*—Broncho-vesicular respiration in both lungs; right as open apparently as the left, the vesicular quality being ascendant; is convalescent in spite of the hæmorrhage; mother thinks he was feverish in the night.

*Treatment.*—Five grains of quinine by enema; cough mixture as before directed; warm vapor inhalations reduced to

three or four times in twenty-four hours. Diet the same.

January 19th, 9 A. M.—Is still improving, although blood appears in the sputa. Treatment continued.

January 21st.—Patient discharged; still having a slight cough but convalescent.

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ART. III.—TETANUS—TREATED BY HYDRATE OF CHLORAL—RECOVERY. By W. M. McGALLIARD, M. D., Donaldsonville, La.

Joseph Perilloux, aged thirteen years, a well-developed farmer's boy, native of the Parish of Assumption, La., ran a nail into the plantar surface of the left foot on the 9th of March. The nail was removed, and little inconvenience felt till the 20th, when, after a little pain in the foot and limb, well marked symptoms of tetanus were developed on the 25th, sixteen days after the wound. I saw him on the morning of the 25th at 10 o'clock. The characteristic risus sardonicus was well marked; jaw stiff, but could be opened with the finger so as to allow him to take fluids. He could not articulate; abdomen hard; appetite good; bowels constipated; pulse excited; temperature 99; wound unhealthy; secreting a small quantity of sanious fluid. Ordered poultice and turpentine to the wound; an injection of oil, turpentine and water; and ten grains of hydrate chloral every two hours till relief is obtained.

27th—10 A. M.—Much better; slept well after taking the first dose of chloral; spasm returned again in the evening; relieved by chloral; slept well during the night; spasm returned again this morning at 6 A. M.; relieved as before. There is now very little stiffness of jaw; abdominal muscles relaxed; can take and swallow fluids with mush with very little difficulty; bowels opened; treatment continued, and chloral to be increased to 20 grains if necessary.

28th.—About the same as yesterday, rested well during night; has had but two spasms since I saw him yesterday. Treatment continued.

29th.—Same as yesterday, with pain in back; ordered a blister one by six inches to the spine; other treatment continued, except chloral, which, on account of being so unpleasant, was substituted by a fourth of a grain of morphine every four hours.

30th—12 M.—Much worse; blister produced strangury; has not passed urine for twenty hours; boy much excited, and this condition increased by the anxiety of family and friends. Pulse 90; free perspiration; jaw stiffer; opisthotonos well marked; ordered warm bath and a fourth of a grain of morphine every four hours, and if necessary, to give him eighty grains of chloral, by enema, as he cannot take it by the mouth.

31st—10 A. M.—Better; passed urine after bath; had severe spasm at 11 P. M., when he took, by enema, 80 grains of chloral, after which he slept till morning; jaws easily opened; opisthotonos relieved; stomach softer; pulse 80; skin natural; wound healed; only a drop or two of pus has been noticed since the 26th. Takes chloral well in 20-grain doses by the mouth. Appetite good; bowels opened without enema; treatment continued.

April 1st.—Patient passed a good night; no severe spasm; general symptoms better; treatment continued.

April 2d.—Doing well; chloral produces slight intoxication for a short time, after which sound sleep ensues. Appetite good; bowels acted; skin natural; temperature 98½. Ordered chloral to be suspended during the day, and to take a fourth of a grain of morphine if an opiate is necessary.

April 3d.—Not so well; ate very heartily yesterday, which produced colic, aggravating his symptoms very much. Took fourth of a grain of morphine per enema at midnight, after which he slept well. Has pain in abdomen; no appetite; pulse 90; temperature 100; skin moist. Ordered ten grains chloral, with half an ounce of castor oil by stomach, to be followed by

large enema of water in two hours, and chloral to be repeated when necessary in 10 or 20-grain doses.

April 4th.—Better; bowels acted once last night, and copiously this morning; pulse 84; skin natural; spirits good; appetite returned. Took oil and chloral, but owing to his distaste to chloral, did not repeat it till midnight, after which he slept well. Ordered chloral to be continued with moderate amount of nourishment.

April 8th.—Owing to indisposition on my part, I did not see the patient since the 4th, since which time he has improved slowly. There is some stiffness of jaw and body. He eats and sleeps well; takes chloral when necessary to quiet him; and when awake amuses himself by playing upon his violin, of which he has been quite fond since his disease moderated. Since the above date I have not seen him, but was informed by his mother about ten days after that he had completely recovered. In this case, chloral seemed to act as a sedative and as a cathartic by relaxation without in the slightest degree affecting the appetite or deranging digestion. The patient occasionally manifested an intolerance of the chloral, but by suspending it for a while and giving it in smaller doses, and in the meantime controlling the severe symptoms by some other sedative, the same happy effect was obtained as in the beginning of its use.

## ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—REMITTENT FEVER. By OTIS FREDERICK MANSON, M. D., Professor of Physiology in the Medical College of Virginia, Richmond, Va. [Republished by request of many Physicians.]

I beg leave to present to the Society the succeeding observations on Remittent Fever, as the condensed results of fifteen

years experience in its study and treatment. I do so with a lively sense of the responsibility incurred in advocating a bold method of medication, being fully impressed in regard to its necessity as well as propriety. I feel less hesitation in offering my views at some length, as the subject has not, save to a limited extent, occupied the attention of the Society, and as I think it eminently proper that our transactions should be chiefly formed from the history of diseases as they appear at the present day, embracing the most approved modes of cure.

It will be perceived that I have treated of the disease under three distinct heads. This has been done not only because these varieties are found in nature, but also that I conceive it to be necessary to give a truthful portrait of the affection. Under the name of *Mild Remittent*, I have attempted the description of the disease as it has generally appeared during the period before mentioned. Those treated under the term *Grave Remittent* are cases of rare and exceptional character, chiefly witnessed during the year 1844, and in the Great Epidemic of 1846, and occasionally in previous and subsequent years. Under the title of *Adynamic* Remittent I have noticed a form of this fever, which is chiefly introduced, not only as a species of the disease, but as a variety which seems to form, as it were, the connecting link (though really distinct) between Periodical and Continued Fever, and which is therefore liable to be confounded with it.

### REMITTENT FEVER.

*Synonymes—Bilious Remittent Fever, Bilious Fever, &c.*—Remittent Fever, from its serious tendency, extensive prevalence, frequent recurrence, aud complex nature, possesses, beyond all other diseases, a peculiar and absorbing interest to the Southern Physician; and although seen sporadically in a mild form in more elevated latitudes, it still may be emphatically termed the disease of the Southern climes. It is with this malady that the young practitioner there will be probably first called upon to combat. It is from ignorance of its nature and treatment that many an aspirant has failed to fulfill the prophe-

cies of his young ambition; and veterans, victorious in many conflicts with disease, unmindful of the progress of therapeutics and disclaiming the teachings of a new philosophy, have lost their well-earned laurels.

It is in this disease, and its archetypes, above all others, that the efficacy and certainty of remedial agents are most evidently and conspicuously displayed. It is in view of our brilliant and decisive triumphs in its treatment that hydra-headed charlatanry recoils dismayed before the genius of orthodox science; that the skeptic is compelled to admit that "his doubts are traitors," and the loftiest intellects and meanest minds are alike impressed with the might and majesty of our divine art.

"Homines ad Deos nulla re proprius accedunt, quam salutem hominibus dando."

Impressed, therefore, as he soon must become, with the vast importance of an intimate acquaintance with this affection, the young physician will learn with astonishment, that there cannot be found in any standard work a correct description of its characteristic features as it now presents itself, or safe and reliable rules for its treatment. It is true that, scattered through the pages of the journals, many invaluable articles are to be found, but they are not generally accessible, and if they were, it would be a difficult task for a novice to separate the true from the false, and to form a definite and correct opinion from their scattered and discordant materials. It is deeply to be regretted that this deficiency in our literature exists, and it is from a desire to contribute something to supply it that this article is penned.

### 1. MILD REMITTENT.

*Prodromic Stage.*—The onset of this fever is generally *sudden*, and in cases where premonitory symptoms are present, they are usually of brief duration. The patient has an irrepressible foreboding of evil, is languid, inclined to be drowsy and disinclined to exertion. He experiences fugitive pains in his head, neck, loins and limbs, and sensations of chilliness are felt running along the spine, and from thence irradiating to the extrem-

ities, succeeded by flushes of heat. The appetite fails or is capricious; the tongue is slightly covered with a white fur; the bowels are generally costive, occasionally alternating with diarrhœa; the urine is copious and limpid, and there is frequent micturition, attended with a sensation of heat in the urethra.

*The Invasion.*—This is almost invariably ushered in with a chill, the sensation of cold varying from the production of an evanescent tremor, to a distinct and prolonged rigor, *which may occur at any hour of the day or night.* This INITIAL chill is commonly felt sensibly by the patient, however; and the reduced temperature of the extremities, especially, is evident to the touch of the attendant. The patient is restless, sometimes amounting to extreme jactitation. He is thirsty, and complains of a sensation of internal heat;* his breathing is accelerated, in some cases unequal, and interrupted with sighs; the pulse is frequent, small, and sometimes irregular; pain in some region of the head is usually present, as well as the *spine*, the *latter* sometimes very distressing, and constituting the *principal suffering of the patient;* nausea and vomiting are occasional symptoms, but according to my observation not so generally present as it is usually stated. This stage is commonly of short duration, and is soon followed by decided reaction.

*The Exacerbation.*—The skin now becomes hot and dry, the face flushed, and a roseate glow is perceptible over the general surface. The sclerotica is injected, and the globe of the eye prominent. The cerebro-spinal pains increase in intensity and assume a throbbing character. The pulse acquires volume,

* This sensation of internal heat in the cold stage of malarial fever, as proven by recent researches, arises from an actual increase of the internal temperature as measured by the thermometer placed in the axilla, etc. This elevation of temperature indeed precedes and indicates the approach of the chill, ascending in the cold stage to 105.8°, and sometimes to 106.7° Fahr.

Wunderlich, Das Verhalten der Eigenwärme in Krankheiten. Leipzig, 1870, p. 392.

Hirtz, Nouvean, Dict. de Med. et de Chirurg. prat. Paris, 1867, Tome, v. p. 789.

Dr. Joseph Jones, Malarial Fever; Trans-Amer. Med. Assoc., xii., 493-501.

force, and regularity, but is almost invariably *compressible*. The respiration becomes slower, more uniform, and less laborious. The tongue becomes dryer and more coated, and the secretions of the mouth viscid and tenacious; the thirst continues, but it is not usually so urgent as in the chill. These symptoms increase in intensity until they amount to an acme of exquisite suffering, and then gradually decline.

*The Remission.*—Late in the afternoon, usually between the hours of five and eight in very mild cases, but postponed to some period between midnight and sunrise, in more severe attacks, the fever and its concomitants sensibly begin to yield, and the patient sinks exhausted with suffering into a slumber of variable duration, from which he awakes more or less relieved. The skin becomes cooler and relaxed, the tongue moist; the painful sensations abate, and often entirely vanish; the respiration becomes free, and the pulse diminished in frequency and force. This respite from suffering is usually, however, of short duration, being followed by the recurrence of the stage of congestion or chill. As the *succeeding chills*, however, differ in some important features from the initial chill, we devote to them an especial notice.

*The Chill of Remittent Fever.*—This, according to my observation, never occurs, between the hours of 9 P. M. and the rising of the sun the following day, but usually between the hours of 8 A. M. and 12 M., and occasionally between 6 and 8 P. M.

At or near these periods the watchful attendant will perceive a sensible diminution of temperature of the extreme parts—viz., the nose, toes, and fingers, or the whole hands and feet will be found below the natural standard, being cool and damp, *the rest of the surface retaining its febrile heat*, more evident in the cerebro-spinal and epigastric regions. In this condition, the patient rarely complains of any sensation of cold, but often of heat, desires to be fanned, the clothing to be removed, and entreats for cold drinks. The pulse is frequent, but usually regular; the bowels torpid, but easily excited into

action. Nausea and vomiting are sometimes present, the fluids ejected from the stomach being usually of a bilious character. The respiration is not much affected, but the patient yawns and gapes, utters deep sighs, alternating with *forcible voluntary* expirations.* The duration of this stage is usually brief, rarely lasting more than an hour, and is succeeded by the reaction, which is marked by an extension of the febrile heat over the whole surface, and a repetition of the symptoms of the first exacerbation just described. As the disease advances the pulse becomes increased in frequency, quickness, and tension, but diminished in volume. Evidences of organic irritation, usually referable to the abdominal organs, become developed. The tongue becomes more coated and acuminated, with a perceptible redness at its extremity and on its edges. More or less tenderness on abdominal pressure will now be felt, with gastric and intestinal irritability, attended in some instances with an intolerable burning pain, most intensely felt during the chill. Percussion will generally detect an increase in the size of the spleen, and later the hypertrophy becomes obvious to the eye, particularly when the patient is in a sitting posture. Diarrhœa may now make its appearance; but generally its occurrence is postponed to a more advanced period; but it may now be observed that aperients of the mildest kind are prone to produce intestinal spasm and hypercatharsis, particularly near the chill period. The disease now progresses with aggravation of the cerebral and gastro-enteric symptoms, until from the third to the fifteenth day; it usually terminates without the interference of art, in three modes to be described under the following heads:†

* By this is meant the common respiratory expression of suffering from intense heat.

† I have omitted the very rare termination in health—as I have never witnessed it unaided by medicine. However proper it may be, and doubtless is, to leave some diseases to the Vis Medicatrix Naturæ, in this art should be supreme.

*In Grave Remittent.*
*In Adynamic Remittent.*
*In Intermittent Fever.*

*Type.*—It will be seen from this sketch of the disease, as it usually appears, that its common type is *Quotidian;* but owing to the fact that in many cases the exacerbations of the alternate days correspond with each other in presenting more violent reaction, and the intermediate paroxysms being milder, the majority of writers have assumed it to be of the tertian or double-tertian type. This, we think, is erroneous; for close observation, on the part of the physician, will almost invariably detect its quotidian character, as evinced by the diurnal occurrence of the stage of the congestion already described. In very few instances have we failed to discover it; indeed, it often happens that the sensations of chilliness and coolness of the extreme parts are more perceptible when preceding the mild exacerbation than previous to the more intense reaction of the alternate paroxysm.

OCCASIONAL SYMPTOMS.

*Delirium* is sometimes present in the exacerbation, chiefly observed in children, and adults of a nervo-sanguineous temperament, but it is usually mild, of brief duration, declining with the fever, and disappearing entirely before the subsequent chill. Sometimes, however, it is violent, fierce, and protracted, forming apparently an alarming and dangerous feature; even in those cases, however, it almost invariably disappears before the next paroxysm, thereby betraying the periodical nature of the affection. The passive, persistent delirium common to continued fever is only seen at the termination of protracted cases, when it has assumed the adynamic character.

*Coma* is occasionally observed. Children and aged persons often manifest it in a partial manner, by a somnolent tendency in the exacerbation. In the latter class of patients it is sometimes complete and protracted. The patient lies on his back, with the eyelids opened, with a dull, fixed, vacant stare. The breathing and pulse are not much accelerated, may be entirely

normal, and in some cases are morbidly slow. The bowels are quiet, but the patient has copious, frequent, and involuntary discharges of urine. He utters no articulate sound, and the function of deglutition seems to be lost. He receives fluids into his mouth, but does not betray any perception of savors; for all kinds are indiscriminately spat out in a perfectly natural manner, save without any reference to the place of deposit. These symptoms all disappear in the remission, and under proper treatment cannot be considered of very grave omen.

*Convulsions* sometimes occur in hysterical females and children; they are usually of brief duration, and even in the latter class of patients, are rarely a source of danger, in our experience, when they take place in the early part of an attack. Occurring, however, in the latter stages of protracted cases, they may be considered as very fatal symptoms.

*Remittent Fever of Puerperal Women.*—We desire to call the special attention of the young practitioner to the peculiar phenomena presented in this fever, when occurring in females soon after *accouchement*. It may be regarded as an etiological axiom, that whatever tends to prostrate the nervous, or deplete the vascular systems, renders the organism strongly predisposed to endemic or epidemic influences. In puerperal women both of these conditions unfortunately exist, and it is not, therefore, surprising that they should be often attacked with this affection. The patient is generally seized with a chill, which may be mistaken for the usual rigor after parturition, or that introductory to the febris lactea. This is soon, however, followed by an unusual, intense, and prolonged reaction. The secretion of milk, if existing, is arrested, and the lochial discharge is partially or completely suspended. Intense dorsal and abdominal pains are experienced, and the uterus becomes evidently enlarged, rising above the pubis, and very tender on pressure. As the exacerbation declines, the suffering abates, and the lochia may partially reäppear in the remission, which is usually quite evident. Close observation will soon thereafter detect the coolness of the extreme parts antecedent to a second

paroxysm, which is attended with augmented spinal and abdominal pain and tenderness. Increase of the uterine tumor ensues, the abdomen becomes tympanitic, and will not bear the slightest pressure. The tongue becomes red, or red on its edges, and brown or black in its centre. Obstinate vomiting ensues; colliquative diarrhœa sets in, and coma or convulsions close the scene. It is clearly evident from these symptoms, that this complication may be mistaken for puerperal fever. As far as the local symptoms and functional disturbances are concerned, the analogy is very evident, with this important distinction, however, that the local symptoms and the lesions of which they are the exponents, are the consequences, and not the cause of the febrile disturbance. The paroxysmal character of the case, as shown by the marked remissions and exacerbations of fever, the regular increase and abatement, *pari passu*, of the local symptoms, and the phenomena pertaining to the stage of congestion, will generally enable the observant physician to lift the mask from the features of the case, and to discern its distinctive character. Discomfiture to himself and death to his patient will probably result, if, erring in discrimination, he resorts to the usual antiphlogistic treatment of puerperal peritonitis; whilst on the other hand, by the adoption of the proper means, the disease may be generally arrested. Concerning no disease, perhaps, are more antagonistic views promulgated than in regard to the nature and treatment of puerperal fever. In the opinion of the writer, these discrepancies can only be explained by the fact that, although the disease, as it presents itself to different observeas, is similar in its general features, yet, owing to epidemic influence, and in some instances a specific contagious miasm, it differs widely in its symptoms and causes, and requires as equally different modes of treatment.

### II. ADYNAMIC REMITTENT.

Remittent fever of a low grade and persistent character, strongly simulating continued fever, may present itself as a *sequel* to neglected or mismanaged cases of the ordinary form of the disease, or may recur *primarily*. Its approach is com-

monly, however, less abrupt than the usual form, the invasion being often unattended by a decided chill. In other respects the prodomes do not differ essentially from those of an ordinary attack. The pulse is of moderate frequency, not usually exceeding 100 per minute in adults. The exacerbations and remissions are indistinctly marked, the pulse in many cases varying only 8 or 10 beats in twenty-four hours. The heat of the skin is moderate, and very often attended with some moisture during the greater period of the attack. When the disease is fully formed the tongue becomes more or less pointed and red at its tip and on its edges, with a brown fur on its dorsum. The patient does not usually experience much acute pain. A dull headache, but not continuous, together with some abdominal uneasiness are generally present. Diarrhœa sometimes occurs, and although it may be absent, a tendency towards it is manifested by a morbid susceptibility to the action of cathartics; the mildest aperients producing severe tormina, and frequent copious serous discharges. As the disease advances the tongue becomes dry, brown, and even black; or parting with its coat, it presents a clean, red, shining surface. The abdomen becomes tympanitic, tense, and tender to the lightest touch, or as in some cases, although enlarged, yet it is soft, its walls yielding to the weight of the viscera; the skin being wrinkled, dry and desquamating, and the separate and relaxed muscular fibres impairing a sensation to the hand, as if the cavity was filled with lumbrici. The mind is usually clear in the first stages; as the disease advances, however, the intellect yields. Continuous muttering delirium, colliquative diarrhœa, and sometimes intestinal hæmorrhage supervene (the blood in the latter instance being fluid, uncoagulable, and horribly offensive), under which the patient soon succumbs.

### III. GRAVE REMITTENT FEVER.

*Synonymes — Congestive Fever, Pernicious Fever, Algid Fever.*—We now proceed to describe a grade of remittent fever that may be justly ranked with the most fearful and fatal scourges which afflict humanity. In the phases of this affection

predescribed, nature seems to have resisted the action of the morbific cause with energy and promptness, but in this, the vital power seems overwhelmed and powerless, and unassisted, too often surrenders.

Grave remittent may occur as a primary form of disease, occurring suddenly without premonition, or as more generally the case in this region, it commences with the symptoms of mild remittent or intermittent fever, when either from its natural cause, or more frequently from exposure or improper treatment, such as ill-timed depletion or purgation, it suddenly presents the grave and alarming symptoms which characterize it, the most conspicuous of which are a prolonged cold stage, and failure or disappearance of the pulse. The symptoms, however, in other respects often widely vary, and in my opinion may be classed under three heads, viz: Those referable to and arising from a perverted action of different portions of the cerebro-spinal axis, as follows: 1st. Symptoms arising from congestion of the cerebrum. 2d. Those arising from congestion of the cerebellum, pons varolii and medulla oblongata; and 3d. Those arising from congestion of the spinal cord. We deem it proper, however, to describe the symptoms usually presented in all of these modifications. The phenomena which forcibly arrest the attention of the observer, are those present by the state of the skin and the pulse. The patient is cold, the features are sharp and shrunken, and the surface shrivelled. In some cases he is merely pale, but in worst cases the skin is of a dusky, purplish hue. It may be dry, but usually it is damp, or even wet with exhalation, which is sometimes glutinous in its character. It may be deficient in sensibility to such an extent that the common external irritants, such as rubefacients, sinapisms, and blisters, produce no impression. This condition of the skin may exist over the whole body, but usually within my observation, it does not pervade the trunk, being confined to the upper and lower extremities, the nose, cheeks and ears, the rest of the head and the body being of febrile heat. The pulse is very frequent and small, and in some rare instances disappears entirely from the wrist.

The respiration is more or less disturbed. The patient complains of a sense of oppression about his chest, he sighs often, suffers from sensations of internal heat, demands cold drink, desires to be fanned, and strenuously objects to any covering being placed on his clay-cold limbs. The cardiac sounds and impulses are normal, and in some cases more distinct than in health, where the *coldness* of the surface is confined to the *extreme parts*, but when it pervades the whole periphery, the sounds and impulses are indistinct and feeble. The strength of the patient is often remarkable, so that he is able to assist himself, and even to walk about his room for some time. Diarrhœa is sometimes present, but it is not a constant symptom. The duration of the cold stage varies very much, but it rarely continues beyond eight or ten hours; it however may endure much longer.

*The Exacerbation.*—The reaction may be perfect or partial. The heat gradually returns to the surface and extends to the extremities, the pulse becomes less frequent and more expanded, the breathing becomes disembarrassed; the symptoms common to the milder grade being in ratio with the development of the febrile action. This stage endures from ten to twenty-four hours, and is succeeded by the stage of congestion, which in turn yields to a reaction more or less distinct, or is fatal, the disease having a tendency to terminate on the third, fifth and seventh days mortally, or subsiding in the mild form or in intermittent fever.

CONGESTION OF THE CEREBRUM.

*The Cold Stage.*—The patient may be suddenly seized with symptoms of inordinate sanguinous determination to the superior portion of the encephalon, but usually there are some premonitions. He complains of pain in the frontal region of an acute throbbing character. The intellect is confused and wandering, and he is disposed to sleep, the drowsiness gradually increasing to coma. He seems to be in a profound sleep, but sometimes can be aroused by shaking him forcibly and calling aloud, when he may reply in monosyllables and intelligibly, but

instantly sinks into stupor again. He breathes softly, regularly, and but little more frequently than in health. His extremities are cold and of a bluish tint, the coldness extending to the pelvis and axillæ, the trunk and head being of febrile warmth. In some instances the whole surface is cold, but these are rare. The skin is usually dry or but slightly moist, this variety not being usually attended with colliquative sweat. The pulse is frequent and small.

*The Exacerbation.*—The pulse still indicates evidences of an impeded circulation, and rarely regains its volume or force, the breathing becomes more accelerated, the patient grows restless, and gradually regains his faculties. He now complains of cephalic pain, of nausea, and occasionally vomits, and the whole surface becomes warm, and even hot. As the exacerbation declines, the patient becomes more comfortable, and himself and friends look forward to a speedy convalescence; but this is a deceitful calm. The cold stage recurs with aggravation of the cerebral symptoms, and increased prostration of the general powers. In some cases, however, without assistance, the second cold stage assumes a mitigated character, gradually subsiding into mild remittent, or the intermittent form. When the disease, however, continues unabated, the third paroxysm is prone to prove fatal, but the termination may be postponed to a more advanced period.

CONGESTION OF THE CEREBELLUM, &c.

*The Cold Stage.*—Unlike the variety just described, the intellectual functions in this are undisturbed. The patient complains of fixed pain in the occipital region, is very restless, constantly shifts his position, complains of great difficulty of breathing, and often declares "he will die for the want of air." He experiences a distressing sense of internal heat and oppression. The respiration is irregular and laborious, the expirations being forcible and prolonged. The skin is cold, of a purple and mottled appearance, bedewed with moisture. This state of the surface is usually confined to the extremities, the remaining surface being above the natural temperature. The

tongue is dusky and expanded, and in extreme cases it is cold, as well as the breath. The bowels are generally sluggish, but the urine is copious and limpid. The patient often arises from his bed, but his *gait* is *tottering* and *unsteady*, and he sometimes falls to the floor, as if stricken lifeless, but instantly arises again, thereby proving that it is not simply from *debility* that he is unable to retain the erect position, but from a *loss of control* over his *muscular movements*. The pulse is very frequent and small; nausea is not usually present, but the patient makes frequent efforts to vomit, thinking thereby to remove the thoracic oppression. Insensibility of the stomach to the action of medicine is a prominent condition in this stage, which rarely endures more than ten hours.

*The Exacerbation.*—The reaction gradually ensues, and in proportion to its development the symptoms belonging to the cold stage disappear. The respiration becomes more regular and free, the pulse slower and expanded, the skin becomes warm, and even hot, and the pain in the occipital region mitigated; nausea and vomiting are apt to ensue, and the stomach responds to the action of medicine readily. Without interference the cold stage again recurs, the second paroxysm often proving fatal.

SPINAL CONGESTION.

*The Cold Stage.*—This is attended with symptoms of a milder character, and is of shorter duration than the preceding varieties of the grave form. The spinal pain is confined to the dorsal and lumbar regions, and is not of an acute character, save when pressure is made upon the affected region. Unlike the former varieties, in this the intellect is unaffected and the respiration free.

The diminished temperature is usually confined to the extremities, and rarely extends beyond the knee and elbow; nor is there usually present any superabundance of moisture, the cold surface being dry or merely damp, the remaining surface (always excepting the facial extremes) being above the natural heat. The patient (in this as in the former varieties) is igno-

rant of the coldness of the extremities, and complains of heat, is restless, and suffers *violently* from *spasmodic pain in his bowels*, which are usually costive. To such an extent are the abdominal pains present, that the disease has been mistaken for an attack of colic. The pulse is not usually much accelerated, but is irregular during the paroxysms of abdominal pain. This stage rarely exceeds one or two hours in duration.

*The Exacerbation.*—Although the reaction is usually decided, the fever is rarely intense. The skin becomes warm and expanded, and often moist. The pulse, unlike as occurs in the former varieties, now usually becomes *morbidly slow*, and is *characteristic* of this phase of remittent. This condition of the pulse, unless closely observed and counted, is apt to throw the inexperienced off their guard. I have known physicians of no mean skill to declare that a patient was but slightly ill, who nevertheless expired in the next paroxysm. More or less tenderness will be found on pressure of the abdomen, chiefly in the umbilical region, but the spasmodic pains are always mitigated, and sometimes entirely disappear in this stage, which is more prolonged than in the other varieties. A complete remission late in the night or during the morning hours often ensues, in which the patient sleeps quietly, and presents so few marked indications of disease as to attract but little attention. The cold stage, however, reappears, attended with more aggravated symptoms. The abdomen becomes enlarged and exquisitely tender, and the agonizing abdominal pains return.

As the disease advances the abdomen becomes tympanitic. Serous, or as is more often the case, hæmorrhagic discharges ensue, the blood being black, liquid, and offensive; the coldness extends over the whole surface, a clammy sweat breaks out, the features become cadaveric, and the patient sinks into coma and expires. The fatal termination is, however, usually postponed beyond the seventh day.

### DIAGNOSIS.

From the foregoing sketches of the various forms, grades, and complications of this protæan affection, it is evident that

the inexperienced observer will often find much difficulty in discerning its true character. The peculiar traits of the disease in puerperal women have been already pointed out, and the various phenomena incident to the different grades described, which we hope will prove to be some aid to discrimination in the majority of cases; but as remittent often simulates continued fever, we deem it necessary briefly to indicate the distinction.

A well-marked case of either disease would rarely be mistaken by an observer of ordinary perception; but under the head of adynamic remittent, we have endeavored to depict a form which bears enough resemblance to typhoid fever to be often confounded with it. Like typhoid fever, adynamic remittent may appear at any season of the year. It is rarely attended with much acute suffering, and is protracted in its duration. The resemblance is rendered more striking by the evidences of abdominal lesion in both, the tongue being inclined in either to be red and dry, and diarrhœa and meteorism being symptoms common to both. Here, however, we think the analogy ends. In remittent there is an absence of that peculiar, stupid, vacant expression, deafness,* and the irregular exacerbations of continued fever. Epistaxis and sudamina, so commonly present in typhoid, are rare in remittent fever. The chill of remittent differs from that of any other disease whatever. In typhoid fever there is a peculiar condition of the patient, which, as we have never seen described, we think it proper to notice. The patient complains of a sensation of intense cold, and in some instances will shiver as with an ague. These nervous shudderings, or instances of extreme nervous irritation, as we deem them, may occur frequently during the day or night with great irregularity, disappearing for several days together, and then returning again. So far as our observation, these rigors are unattended with the slightest diminu-

* It will be perceived that I have not mentioned the eruption (rose-colored spots) said to be pathognomonic of Typhoid Fever, as I have assiduously sought for, but never found them.

tion of temperature of any part, the whole surface being rather above the normal standard, even to the most extreme parts; indeed we have noticed these paroxysms to occur in many instances when the patients were in a warm perspiration. It is also worthy of notice, that these chills (as writers term them) are not followed by any perceptible increase of febrile excitement, which is an invariable sequent to the chill of remittent. The pulse, although frequent in both diseases, yet is attended with fluctuations so different from each other in the respective fevers, as to present a most invaluable aid in diagnosis. Cullen, Parr, Good, and others, have declared that in continued fever there are two diurnal exacerbations, whilst in remittent there is only one. We have often verified the truth of their definition, and we feel assured that in doubtful cases the peculiar character of the fever will be detected by the test. The pulse should be counted at short and regular intervals throughout the day and night. If the case is continued fever, it will arise and decline twice, the first exacerbation occurring in the morning, and the second in the afternoon or night. In remittent, only one exacerbation will thus be discovered.

The perspiration and urine have a peculiar odor in typhoid which I have never observed in remittent fever. The intestinal evacuations are infinite in their varieties in both diseases, but there is a discharge of a peculiar character in the majority of cases of typhoid which I have never seen in remittent. They are of a shining, reddish-brown appearance, about the consistence of molasses, and seem glutinous in their nature, adhering to the sides of the vessel, and are very offensive. The viscid, green, black, inodorous, bilious evacuations which almost certainly denote a favorable termination in remittent I have never seen in typhoid fever. In the latter disease healthful and perfect digestion often returns, and natural and consistent fæces are evacuated sometimes before the disappearance of febrile excitement. These we have never witnessed in remittent until convalescence was established. Intestinal hæmorrhage is often present during the course of typhoid fever, but, as a rule, at-

tends only the termination of remittent. In the former it is often salutary, the blood being of a bright red color, coagulable and healthy in appearance. In the latter it is fluid, black, and offensive, and is usually indicative of a fatal termination. I have not thought proper to recapitulate all of the diagnostic signs known, which would be proper in a treatise, but supererogatory in a contribution. It is believed that the foregoing will almost invariably enable the practitioner to detect the proper character of the case.

### NATURE OF REMITTENT FEVER.

As we design this to be a practical paper, we purposely shun the metaphysical labyrinth to which a discussion concerning its cause inevitably tends—a controversy perhaps more protracted than profitable; but an inquiry into the conditions of the organism, as morbidly impressed, comes fully within the proper scope of the present article, as it has an important bearing on the therapeutics of the disease. The attention of the physician cannot fail to be first and most forcibly directed to the apparent unequal distribution of blood in this malady. He observes a constant tendency in the vital current to retrocede from the extremities to the trunk and head, and in grave cases, from the whole surface to the internal organs. It is true, this tendency is not so conspicuous in the mild form of the disease; for there the natural powers of the system seem competent to resist successfully the centripetal tendency of the blood. The symptoms presented in the milder varieties, were, therefore, of a mixed or twofold character. First, those presented by the action of the morbific cause; and secondly, those displayed by the resistance of the organism against it. In the more violent form of the disease, which we have described under the name of grave remittent, the phenomena presented are those chiefly induced by the immediate agency of its cause, and furnish to the scientific observer the proper phase for the study of its pathology. It is from the symptoms, therefore, of this, the most perfect species of the disease that we shall chiefly endeavor to illustrate its nature.

A person in the enjoyment, apparently, of perfect health, is suddenly, without warning or assignable cause (as is often the case), prostrated. He is cold, but knows it not; but, on the contrary, has all the gestures of a man oppressed with heat. The blood circulates feebly on the surface, the cutaneous vessels seem almost to have lost their contractility, and the fluid portions of the blood exhale through their relaxed parieties. The skin is also deprived to a great extent of its sensibility, the most powerful irritants failing to produce any impression. Where is the missing blood? It has not been lost. This colliquative sweat and diarrhœa might indeed subtract from its mass, but in the gravest cases these are often absent! The vital current has passed from our immediate vision, it is true, but it must be somewhere. The axiom cannot be controverted, that in the system there is a certain quantity of blood, and if the normal quantity is absent in one part, it must necessarily be present in excess in another. Happily the overburdened organs speak in a language not to be mistaken. The cerebral pain, the somnolence deepening into coma, with the additional symptoms pertaining to the first variety, betray the congested condition of the cerebral vessels; whilst in the next variety, the cerebellic pain, the difficult and irregular respiration, the tottering gait and sudden temporary loss of motion, denote the inferior portion of the encephalon as the seat of undue phlogosis; and lower down, the spinal pain, with a constantly corresponding torpor and spasm of the intestines betray an analogous condition of the spinal cord.* Of the cause of this inordinate determination to the nervous centres, as we have premised, we do not propose to treat; but that it exists, we think clearly deducible from the symptoms. We deem this most important knowledge, as it indicates an important point in the system of treatment to be pursued. It explains the sal-

* These views of the pathology of the affection are not merely hypothetical. They are fully confirmed by post mortem disclosures. Bailly and Maillot found congestion of the encephalon, or spinal marrow, in nearly every case examined.

utary action of revulsives and derivatives, and it indicates the benefit to be derived from local bleeding from the cerebro-spinal regions. That lesions of the stomach, liver, spleen, and intestines are often observed *post mortem* cannot be denied; and in portraying the symptoms, we have not failed to exhibit the evidences of such affections during life; but these are proven to be secondary results from two conclusive facts; first, that the symptoms of lesion are not present at the inception of the disease, nor during its course, save when the febrile reaction is decided; and secondly, that they soon disappear after the paroxysms are arrested. But we should not underrate the importance of the fact, that lesions occur because they are sequents of the general hyperæmia. They often present barriers to the success of treatment; and experience teaches us that in our efforts to cure, due attention should be given to them, and proper measures adopted for their removal.

### TREATMENT OF MILD REMITTENT.

Active measures will be found usually unnecessary during the chill, as the vital powers are fully competent to produce reaction. I disapprove of the method of torturing the patient with heavy bed-clothes and hot applications in this form, but consult his feelings in regard to them, and allow cool drinks in moderate quantity.

*In the Exacerbation.*—If the pulse is hard or full and resisting, especially if attended with intense cerebral or spinal pain, a moderate bleeding from the arm will produce great relief, but this will be rarely necessary. Local bleeding will be generally found sufficient, and is an invaluable adjunct. Leeches to the temples, or cups to the occipital or spinal regions may be freely applied, as the determination may indicate. If nausea and vomiting, or other symptoms of gastric irritation be present, leeches or cups to the epigastrium will be followed by great relief; and if these should be succeeded by a simple enema, under their conjoined action the bowels will gently respond, and add greatly to the comfort of the patient. Cold drinks, ice, the effervescing draught, and lemonade, may be freely allowed. Un-

der this treatment the patient will find great alleviation from suffering, and the intensity of fever will be diminished. At bed-time, say at nine or ten o'clock, it is almost our invariable rule to administer a cathartic dose of calomel and rhubarb, of ten or twelve grains each. At some period before or after midnight, the fever will generally be found more or less to decline. We prefer this period for the commencement of the abortive means, because our experience teaches us that quinine, the principal remedy, is then better borne and produces its salutary effects in a more decided and complete manner than at any other time. We now therefore, usually administer from ten to twenty grains at a single dose, in pills, or diffused in a wine glass of cold water. We regulate the dose by the degree of fever present. If it is intense, we administer the larger quantity; if very moderate, the lesser will answer. Under the combined action of the mercurial and quinine, free evacuation of the bowels will usually occur, but rarely excessive. Three or four hours are now suffered to elapse, during which the topical bleeding is repeated if the local symptoms do not yield. The condition of the patient will now be found generally much improved. The cerebro-spinal pain is either removed or mitigated, the pulse less frequent and more soft, the skin relaxed and moist, and the gastric irritation subdued. We therefore repeat the quinine in diminished doses of five or six grains every three or four hours, until the period of chill has passed, generally exhibiting altogether from twenty-five to forty grains before that time. In cases attended with much gastric irritation or diarrhœa, the addition of a full dose of opium—* say one and a half or two grains to ten or twelve grains of the submuriate at bed-time—instead of the rhubarb, forms an excellent combina-

* Since this article was written, in these cases attended with gastric irritation, I have employed the preparations of morphia introduced by hypodermic injection, with the most gratifying results. One-fourth to one-third of a grain of sulphate of morphia used in this manner, is usually sufficient, but may be repeated if necessary.

The sulphate of quinine may be given in the same manner in such cases, its

tion, which will enable the stomach to retain the quinine, afterwards administered with more certainty. Under this simple plan of treatment, remittent fever, as it appears usually in this section, is certainly and safely cured. We have in this manner arrested the disease in many hundred cases, in one night. Owing, however, to the peculiar liability of the affection to relapse or terminate in protracted intermittent, we usually continue treatment. We think it advisable to prescribe a mercurial alterative of calomel or mass hydrarg. for two or three successive nights, followed by eight or ten grains of quinine, or twenty-five drops of oil of turpentine, in divided doses on the succeeding mornings. In cases attended with coma, delirium, or convulsions during the exacerbation, topical bleeding will be freely required, and the application of cold. We have, however, been more satisfied with the effects of the *cold douche* in these complications, than with any other remedy. A full dose of calomel should be given as soon as practicable, followed by stimulant enemata. In mild cases, however, it will not be necessary to resort to very active treatment, as these symptoms gradually yield with the subsidence of the paroxysm. In this disease occurring in puerperal women, in addition to the general plan detailed, free local depletion over the uterine region is practiced, succeeded by warm fomentations. The local symptoms disappear readily with the arrest of the paroxysms. In the form described under the title of adynamic remittent, occurring as a primary form, this mode of treatment will usually suffice; but

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effects being near equally as efficacious as given by the mouth, two-thirds of the quantity given by the latter mode being sufficient, when introduced subcutaneously; for which I prefer the following solution, recommended by M. Dodenil: †

Sulphate of Quinine, 2 parts;
Tartaric Acid, 1 part;
Distilled Water, 20 parts.

The tartaric acid was used to effect the solution on the recommendation of M. Claude Bernard, who states "that the vegetable acids are better tolerated than the mineral acids."

† Traite des Maladies Infectienses, par, W. Griesinger (note to page 81, by the French translator, Dr. G. Lemattre), Paris, 1868.

in protracted cases, a different practice will be found necessary, as quinine is not borne well, and the anti-phlogistic remedies detailed are contra-indicated. Minute doses of calomel combined with opium, will usually be found of great service, along with the employment of the oil of turpentine, which may almost be regarded as a specific in this variety. It is more suitable than quinine in this condition, as it is better tolerated; and whilst it possesses febrifuge properties very similar to the alkaloid, it also exerts a happy influence over the gastric and intestinal irritation so commonly present. It may be given in doses of ten to twenty drops, in emulsion, repeated every three or four hours until the symptoms yield.

It should be persisted in until the patient is fairly under its influence, unless the effects it occasionally produces—viz, hæmaturia, strangury, or its peculiar intoxication, supervene, when, of course it should be discontinued. It would require too much space to speak of this remedy in this place as it deserves.

TREATMENT OF GRAVE REMITTENT.

*The Cold Stage.*—In this grade, external means are all-important. Warm applications are to be assiduously made to the parts reduced in temperature, together with stimulating frictions. These should be freely applied to the whole length of the spinal column and the extremities. A large blister should be placed over the epigastrium, and if the head is affected, another to the nape of the neck.

*Medicine.*—To produce reaction, along with these applications, I prefer enemata of quinine. The plan preferred is to dissolve ten grains in a wine-glassful of weak effusion of capsicum, (made by adding twenty grains of the latter to a pint of boiling water) with the addition of a few drops of elixir of vitriol. This is thrown up the rectum every half hour until symptoms of reaction ensue. If diarrhœa has been, or is present, I prefer enemata of quinine and laudanum, the former first dissolved in water by the addition of the acid.* By these means alone,

*I should now administer the quinine (with or without morphia) hypodermically in these cases.

cases apparently hopeless have been rescued. In a case of very protracted cold stage, a combination of 1 gr. of calomel, 1 gr. of quinine, and ¼th of a gr. of opium, together with frequent doses of camphor water, induced a speedy reaction. The oil of turpentine in spinal congestion is also an excellent remedy. Ten or fifteen drops, alone or combined with laudanum, may be given every one or two hours, or more frequently.

*The Exacerbation.*—The reaction is sometimes intense. When this occurs, I have ventured on the abstraction of blood from the arm in moderate quantity with decided benefit; but this is seldom necessary. The case now only requires to be treated as the milder grade, save perhaps, with a more liberal use of quinine. A moderate dose of calomel (10 or 15 grs.) alone, (or combined with 1 or 2 grs. of opium, if there is much gastric irritation or diarrhœa) is followed in 2 or 3 hours by a full dose of quinine (20 grs.,) and repeated in doses of 5 to 10 grs. every 3 or 4 hours until 35 or 40 grs. are taken. The medicine should be so regulated, that the last dose may be taken 2 or 3 hours before the expected paroxysm. I have never seen a chill or cold stage recur after 40 grs. of Farr's quinine had been retained. Although the patient may be generally considered out of danger when the paroxysms have been arrested, yet I esteem it to be good practice to prevent relapse, by placing the patient on a gentle alterative course, and to repeat the quinine in diminished quantity for several days thereafter.

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ART. II.—REMARKS ON SOME PRACTICAL POINTS CONCERNING CATARACT EXTRACTION. By Dr. H. KNAPP. [Reprinted from the Transactions of the American Ophthalmological Society, July, 1870.]

By personal intercourse with members of the profession and the perusal of the American Medical Press, I learn that in this country a greater divergence of opinion than there should be,

still exists with regard to the best modes of cataract operation. I am, you know, an advocate of Græfe's peripheric linear extraction, which I continue to practice with results more satisfactory than I obtained by any method I practised in former years. In the hope of encouraging an exchange of opinion, I beg, Mr. President, to make some remarks on Græfe's method of extraction, which have been suggested principally by the experience derived from the operations I performed in New York.

During the last fourteen months I have made, at the New York Ophthalmic and Aural Institute, twenty-seven extractions. Two of them were complete failures, the one by suppuration of the flap, the other by purulent iritis. The operations in both these cases had been unexceptionable. The remaining twenty-five cases were complete successes, no so-called half or moderate success having occurred.

With regard to the *form of the knife*, I prefer instruments with *blades as narrow as possible*. They are better adapted to the execution of a linear section than broader instruments, and can be pushed with facility through the anterior chamber, allowing of a partial withdrawal, if their point become engaged in the iris, or the counterpuncture be made not exactly where it should be. Those who lay more stress upon the peripheral position than on the linear direction of the wound may just as well choose instruments with larger blades, of which every variety, between Græfe's and Beers's knives, has been fabricated and met with local favor.

The *sharpness of the cutting edge* is of the greatest importance in obtaining a regular and smooth section. The section should be executed completely by a single forward and backward movement of the knife. Every additional motion is sawing, which renders the section angular, its surface uneven, and causes more or less unnecessary traction and bruising. It seems to be more difficult to render a narrow blade perfectly sharp than a broad one. I have given this point particular attention, and find that blades with convex surfaces, as in Beers's knives, are the worst of all. Instruments with plain surfaces

may cut well enough, but the best cutting edge is obtained by making the surfaces of the cataract-knife concave, like those of a razor. This I knew long ago, but thought that the narrowness of our instrument would be an obstacle, and so, also, I was told by several makers. Lately, however, Messrs. Otto & Reynders, of New York, have made some cataract knives for me, which are sharper than any I had ever before used. At my request they have kindly given me some of them for presentation and distribution in this Society, in order that these knives may be more extensively tried.

With regard to the *extent* and *position of the section*, I have often observed that tyros in this operation commonly make the section too small, which leads to very serious consequences—viz., difficult and unclean removal of the lens, bruising of the iris and cornea, place the wound too peripherically, lose vitreous, and provoke iritic and cyclitic processes. It would be preferable to place the middle of the wound entirely into the cornea, as some operators are accustomed to do, for this makes the procedure extremely easy, and is hardly ever followed by prolapse of vitreous. I make the section so that its middle lies between the tangent of the transparent margin of the cornea and a point one mm. distant from it. This, with some experience, affords a faultless execution of the section, and does not expose us to the dangers of a corneal wound.

The *laceration of the capsule* I effect in the following manner: After careful excision of the iris, I introduce the cystitome as far as the opposite border of the pupil, turn its point toward the capsule, and open the latter along the margin of the pupil, and along one side of the colobema up to the corresponding angle of the wound, then turning the instrument on its flat side, I push it forward again to the opposite margin of the pupil, slit the capsule along the other margin of the colobema and the periphery of the cataract near the section. Then, in ordinary cases, I withdraw the instrument; but when the capsule is tough, I carry the cystitome again as far as the central point of the opposite pupillary border, rotate it about forty-five

degrees on its axis, seize the circumcised piece of capsule, and endeavor to draw it out with the point of the cystitome. I do not like to introduce the point of the cystitome beyond the visible limits of the pupil, behind the iris, as A. Weber and A. Von Græfe, do, since I consider the just described mode of lacerating the capsule quite sufficient, and think that it is prudent to come as little as possible in contact with the iris. When the capsule is thickened in the centre, as is often the case in hypermature cataracts, I circumcise this thickened *plaque* in a similar way, as above described, and try to extract with the cystitome. If this prove unsuccessful, I extract the circumcised thickened piece of capsule with a delicate pair of iris forceps. In this way that piece of the anterior capsule which is situate in the pupil is removed with the cataract in at least four-fifths of the cases, as those will testify who witnessed my operations. I always laid great stress on the removal of the anterior capsule, being convinced that thereby one of the principal causes of inflammatory reäction and opacification in the pupillary space is eliminated.

The careful opening of the capsule being of the greatest importance, no blood must be allowed to collect in the anterior chamber, as it would mask the point of the cystitome, and render the rather delicate manœuvre uncertain. Hæmorrhage into the anterior chamber occurs sometimes immediately after the corneo-sclerotic section, but more frequently after the excision of the iris. No attempt need be made to stop it, but the evacuation of the blood in the anterior chamber should be effected as soon as the excision of the iris is completed. Ordinarily I succeed in getting rid of the blood by pressing upon the cornea with a small piece of very soft wet sponge. If this fail, I take away the fixation forceps and lid-speculum, and press the blood out by rubbing the lower lid over the cornea, while, at the same time, depressing the posterior lip of the wound with the upper lid. After that I reäpply the speculum and fixation forceps, and proceed in the operation as if no hæmorrhage had taken place.

In effecting the expulsion of the lens, I take care that the corticalis comes out, together with the nucleus, so that one movement of the spoon from the lower part of the cornea up to the centre of the wound removes the cataract completely. To render this possible, in cataracts with soft corticalis, I do not materially lessen the extent of the section, as I did formerly, when I brought the soft remnants out by rubbing of the cornea with the lower lid. The latter method of removing the "after-birth" certainly clears the pupil, but my recent experience has made me suspect that it might prove prejudicial to the healing of the wound. In the few cases which I lost by suppuration of the flap, extensive rubbing had been resorted to; and to this manipulation alone could I ascribe the suppuration. But, Mr. President, we must not forget that the remote and proximate causes of the suppuration of the flap have always been a mystery, baffling, not infrequently, our most confident hopes after the smoothest operations.

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## Art. III.—Prognosis in Chronic Diseases of the Heart.

An important paper on this subject was read before the Medical Society of the County of New York, by Dr. Austin Flint, in March of the present year, and will be found in the "New York Medical Journal" for May. It discusses a subject about which there is still much misunderstanding, and the following remarks will be found to be worthy of the high reputation of Dr. Flint as an authority on the subject of cardiac disease: "An important aspect under which the prognosis of chronic diseases of the heart is to be considered is the innocuousness of certain lesions. Lesions of the valves, as is well known, are represented by adventitious sounds known as endocardial murmurs. By means of these murmurs the existence of valvular lesions is determined, and they are readily local-

ized. If there be found, in any case endocardial murmur or murmurs persisting, and not due to a morbid condition, of the blood, we have the proof of a chronic structural affection; there is organic disease of the heart. But the lesions which give rise to murmurs are by no means always of importance as regards immediate or even remote evil consequences. They may be devoid, not only of danger, but of any morbid symptoms. There are many persons pursuing their various avocations, and wholly unconscious of any malady, who, if auscultated, would be found to have organic disease of the heart. In a certain proportion of these persons the existence of cardiac disease will hereafter be manifested by symptoms and morbid effects; some may at length die from the disease, but in not a few, even if life continue for many years, the only evidence of the disease will be, as now, the presence of one or more of the cardiac murmurs, and death will be caused by some affection which has no connection with the lesions existing in the heart. In cases of innocuous lesions the harm of physical diagnosis is sometimes apparent. Let the simple statement be made authoritatively to one having an innocuous lesion that he has an organic disease of the heart, and he will be likely to look upon himself as doomed. If he be a timid, nervous man, he has received a moral blow from which he does not recover. He sees a sword suspended over him. He is under sentence of death. Not only is he hurt as regards his comfort and happiness, but the depressing effect of the diagnosis, and the altered habits of life to which it may lead, sometimes contribute to impair health, and tend, perhaps, to shorten life.

"I would not for an instant have it supposed that I mean to disparage physical diagnosis. I wish only to place in a strong light the importance of going further than to the fact of the existence of organic disease of the heart. In other words, I would prepare the way for saying that, with reference to the prognosis, more information than the murmurs can furnish is indispensable. What has just been said concerning the long-continued innocuousness of cardiac lesions, I may add, is war-

ranted by my own observations. I have records of cases in which organic endocardial murmurs existed from ten to thirty years ago, the persons now living, and exempt from ailments referable to disease of the heart.—*Can. Med. Jour.*

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ART. IV.—CUNDURANGO. By ALEX. Y. P. GARNETT, M. D., Washington, D. C., July 2d, 1871.

During the past six weeks I have been in almost daily receipt of communications from medical gentlemen in different sections of the country, requesting some reliable information relative to the specific and marvellous virtues claimed for the cundurango, as a remedy in the treatment of cancer.

As it would involve the expenditure of more time than I can spare to reply to these several letters of inquiry separately, I have determined to avail myself of your courtesy to make public such information as I have been able to obtain, and the conclusions to which I have arrived, touching the merits of this new so-called remedy for the cure of cancer.

The source from which the drug is obtained, the mode of preparation and administration, together with the romantic and apochryphal history of its discovery, have already been published to the world. It is not necessary, therefore, for me to refer to such publication further than to observe that the question very naturally suggests itself to the medical mind, what proof have we that this individual was affected with cancer at all? Does the diagnostic evidence of an ignorant, non-professional woman furnish sufficient scientific testimony to enable us to believe that this was really a case of that disease? Do not all the circumstances connected with this story justify the opinion that it is a sensational fiction invented for the occasion, or a traditional superstition of the ignorant inhabitants?

Passing from this question of its discovery, we take the drug as presented to us in this country. It seems that specimens of

the cundurango were distributed sometime during the month of April last by the Department of State to the Surgeon General of the United States Army, to the Chief of the Bureau of Medicine and Surgery of the United States Navy, and to the Department of Agriculture, in order that the remedy should be subjected to the test of chemical analysis, as well as therapeutic experimentation by scientific and competent medical men. In accordance with this purpose a chemical analysis of the cundurango was made by Professor Antisell, of this city, an accomplished and experienced practical chemist, the result of which is here given, as an extract from his report:

"Fatty matter, soluble in ether and partially in strong alcohol, .7; yellow rosin, soluble in alcohol, 2.7; starch, gum, and glucose, .5; tannin, yellow and brown coloring matter and extractive, 12.6; cellulose liquin, &c., 64.5.

"On distillation, no volatile oil or acid was obtainable; no crystalline, alkaloid, or active principle was separable by the usual method of proximate analysis. Whatever medical virtues the plant may possess must reside either in the yellow rosin or in the extractive. The former is soluble in alcohol, the latter in water. In the water decoction some of the rosin is diffused, but the greater portion of the rosin is not extracted by water. The therapeutic position of the plant, judged from analysis, is among the aromatic bitters."

It will thus be seen that, unlike almost all of those vegetable growths which possess very powerful and radical therapeutic influences upon the animal economy—such as nux vomica, cinchona, opium, stramonium, &c., &c.—it contains no active principle capable of being eliminated by the ordinary modes of chemical analysis, and hence it is fair to suppose that it really possesses none, and that its virtues (if it possesses any) are dependent chiefly, if not entirely, upon the resinous principle which is insoluble in water; and yet we are told that it was the decoction or infusion of the drug which was used by the humane and affectionate wife, in her first efforts to dispose of her husband, which first developed its wonderful virtues.

Through the courtesy of Surgeon Norris, of the United States Army, I have been permitted to read his report, made to Surgeon General Barnes, detailing the results of his experience with the cundurango in the treatment of cancer, and, although not authorized to do so by publication, I shall take the liberty of stating that, although the case selected for experiment by him presented all the conditions required for a fair test of its merits, it utterly failed to arrest the progress of the disease, or in any decided manner to modify its character or mitigate the suffering of the patient. The case terminated fatally at the expiration of five weeks from the commencement of this treatment, notwithstanding its uninterrupted administration during that period. I will here add, that exactly similar results followed in another case which was treated in New York with the cundurango, under instructions from the Surgeon General. In both of these cases, specimens of the morbid products procured after death were submitted to microscopical and other tests to confirm the accuracy of diagnosis.

I am also indebted to the gentlemanly assistant, to the chief of the Bureau of Medicine and Surgery, United States navy, for the privilege of perusing a lengthy communication upon the subject of cundurango, made to that bureau by the accomplished pharmacist, Dr. E. R. Squibb, of Brooklyn, in which he very clearly exhibits his entire want of confidence in its merits as a cure for cancer, and classifies it with the numerous empirical agents which have, from time to time, heretofore agitated the public mind and disappointed the hopes and expectations of so many unfortunate victims of this terrible malady. I omitted to mention that two other cases of cancer were treated with the cundurango by a medical officer of the army in this city, but with no favorable results.

In view of these facts, together with others equally impressive which might be stated, I am irresistibly forced to the conclusion that the cundurango possesses no value whatever as a remedial agent in the treatment of cancer; that it is capable, indeed, of doing indirect injury by disturbing the functions of the stomach

and impairing nutrition; that, so far as I have been able to learn, not a single well-authenticated case of cancer has been cured by its use; that I will venture to affirm there is not a physician whose integrity and veracity can be relied upon, here or elsewhere, who will declare that he has cured a case of cancer by the use of the cundurango, and that he is prepared to prove it by exhibiting his patient to the test of competent medical judges.

I am aware that some importance has been given to the testimony of Vice President Colfax in favor of a cure having been effected by the use of this remedy upon a member of his family, but does it occur to the public that the honorable gentleman and his friends may have been mistaken in the diagnosis? Was this a case of genuine cancer? and is the disease permanently cured, if so? In a medical and diagnostic point of view, the testimony of Mr. Colfax is, of course, entitled to no more weight than that of any other layman.

In conclusion, I would simply remark that the apparent and conceded attempt to manufacture a fictitious reputation for this drug, resting as it does upon such questionable data, seems rather to have been inspired by the dazzling prospect of pecuniary speculation, than by a laudable desire to advance the triumphs of science, or to alleviate the sufferings of unfortunate humanity. *Exchange.*

## ANALYTICAL DEPARTMENT.

**"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.**

NOTE.—As the material for this Department has not been prepared, as promised, (the gentleman in charge of the Department being too much overburdened by professional engagements to represent it, as usual,) the following interesting extracts are substituted.—ED.

ART. I.—SURGERY. By N. W. WEBBER, M. D.

*Hæmorrhoids.*—Dr. John H. Packard, of Philadelphia, in an article on the above disease, says: That one of the greatest

conveniences in the examination of the rectum or any of the orifices of the body, is the forehead mirror used by the laryngoscopist. It obviates the annoyance of the surgeon having to dodge the shadow of his own head. While his hands are left free, he can, by changes of his head, throw the light just where he wants wants it, notwithstanding the movements of the patient; can be used at night or in a dark room.

Various kinds of speculums are mentioned, the surgeon using that which pleases him best. In the male subject the disease may be brought completely into view by straining over warm water so as to protrude it; in the female, by the simple plan now to be mentioned; by passing the finger into the vagina, and then turning it backward so as to hook it over the upper edge of the sphincter ani, the rectal mucous membrane may be pushed down and everted so as to expose it for one or two inches. This idea is one of Dr. Storer's, of Boston. Advantage may sometimes be gained by the use of both fore-fingers, left in the anus and the right in the vagina, in estimating the actual bulk and extent of the hæmorrhagial tumors, etc. In the male we must, of course, be satisfied with the introduction of the finger into the rectum, which ought, in my opinion, always to be done in addition to the other investigating methods. Among the causes of hæmorrhoids, too little stress has been laid upon hereditation.

*Symptoms.*—Another point which ought to have attracted more attention is the amount of sympathetic uterine symptoms which may be developed by hæmorrhoids. Great distress may be induced by the grasping of piles by the sphincter, although there is no protrusion whatever. This symptom is much less troublesome in cases where the sphincter has become lax, and prolapsus ani is of constant occurrence; hence it is a feature of the earlier and more manageable stage of the complaint.

*Treatment.*—In some cases, as in pregnant women, the trouble is due to a temporary cause, and will be relieved by its cessation. In others the rectal lesion has lasted so long, and has become so aggravated, with great relaxation of the parts, that,

especially in persons past the middle age, it is better to resort to palliative measures only. In other cases, again, and above all, where a strong hereditary tendency exists, a radical and most palpable cure can be effected by judicious surgery.

One principle should govern us in all the palliative measures adopted in any case of piles—namely, to prevent straining. This may be carried out in various ways. Besides proper and nutritious food, there are four points to be attended to. By means of medicine we keep the bowels easily moved; sulphur with molasses or small doses of epsom salts, etc., etc., will do this. The second measure is mechanical; an opening about five inches wide by fourteen long, is made in a board, to place over the privy-seat, which allows the nates to bulge down too much; this will, in a great degree, prevent the protrusion of the relaxed rectum. The third is the use of astringent suppositories, to be used after each stool. The fourth measure is the employment of a hemispherical block of ivory or vulcanized rubber, about as large as half a billiard-ball, attached to a spring of properly adjusted strength, and this fastened to a belt. When in place it supports the parts, and prevents the descent in walking.

*Operative Measures.*—Internal piles may almost always be safely and effectually removed by ligation, and external by the knife or scissors. The cases which give the most trouble are those in which the two forms are combined.—*N. Y. Medical Journal.*

*Tubal Pregnancy—Spiegelburg: Arch. fur Gynakologie.*—The only authentic case of tubal pregnancy, in which the fœtus attained maturity, is related by Saxtorph, and the history of this case is not sufficiently minute to be made use of; so that the full clinical report of a similar case, which occurred in the practice of Spiegelberg, is of great interest. The patient was a peasant woman, 44 years old, pregnant for the fourth time, and had reached the end of gestation without any abnormal symptoms, when fugitive labor-pains were soon followed by convulsions,

coma, rapid prostration, and death in a few days. The urine was albuminous, and contained urinary casts. A *post-mortem* examination disclosed a fully developed dead fœtus, enclosed in membranes, and lying in a musculo-membranous sac which was formed by the distended and developed fallopian tube, the placenta having its attachment anteriorly. A minute microscopic report, by Waldeyer, confirmed the opinion that it was only the tube which had taken part in the development of the sac. Bundles of muscular tissue were found, the tissue of the ovary recognized microscopically, and, by careful manipulation, the folds of the right broad ligament were separated from one another up to the point where the sac commenced, which thus correspond with the position occupied by the fallopian tube, while a probe passed from the angle of the uterus into the sac along a short canal. Spiegelburg explains the fatal termination of the case by the eclampsia of the mother causing the death of the fœtus, subsequent separation of the placenta, hæmorrhage into the sac, which was already distended to its utmost capacity, rupture, and death from peritonitis. The diagnosis was not made during life, owing to the normal course of the pregnancy, and the fact that the tumor corresponded so closely in position and size with the gravid uterus.—*Medical Times.*

*Tincture of Veratrum in Pneumonia of Children.*—Dr. Jacobi, in a clinical lecture before the New York Medical Journal Association, says: In the acute pneumonia of a baby, I would give a drop of the tincture every hour; to a child four or five years old, perhaps two drops every hour. If the attendant is intelligent enough to count the pulse, I say bring down this pulse to one hundred and ten or one hundred, but not lower; because when the pulse falls lower, the drug is apt to cause vomiting and temporary collapse. To obviate local irritation of the pharyngeal or gastric mucous membranes, I give the tincture in barley-water. This drug has no cumulative effect like that of digitalis. It will bear combination with quinine, and I think this is an important point. I often combine quinine with

veratrum or digitalis where I want to get, not a speedy, but a continued effect upon the pulse, especially in the pneumonia of a debilitated child, where you are in doubt about stimulating to any great extent; where you do not know whether you ought to commence with benzoic acid, camphor, etc., you will control the pulse better with quinine and veratrum than with the latter alone. I ought to add that, in most cases, it is advisable to combine opium or hyoscyamus with veratrum to obviate local gastric irritation.—*New York Medical Record.*

*Cauterization in Diphtheria.*—In the *48th Versammlung Deutsche Naturforscher und Aertze*, Dr. Schuller stated that he had entirely abandoned cauterization of the pharynx, larynx, or conjunctiva in diphtheria. In numerous cases he had, as a crucial experiment, cauterized only one side of the fauces, and he had always been led to the same conclusions:

1st. That the membrane remained attached longer on the side which he had cauterized than the other.

2d. That even the most energetic application of nitrate of silver failed to arrest the reproduction or prevent the extension of the membrane.

3d. In some cases serious tumefaction and inflamation of the cervical lymphatics followed the application of the caustic.

In these views he was supported by Ebert, Stiebel, Cohen, Rinecker, and others, who direct the use of small pieces of ice to be constantly allowed to melt in the mouth, and employ a gargle of potass. chlor., alcohol, potass. permang., carbolic acid, etc.—*The Medical Times.*

*Sympathetic Nervous Troubles from the Presence of a Tenia.* Two cases, mentioned by Dr. Maurin, (in *Sud Medical* No. 5, 1870, and *Lyon Medical*, April 24, 1870), are interesting in this, that they might have given rise to a diagnosis of troubles of the nervous centres.

The first patient was a clerk, aged 42, who for fourteen months had experienced more and more serious illness. At first he suffered from dull pains in the epigastrium; these pains,

after a while, took on the character of an intense gastralgia with inexplicable remissions and exacerbations.

A few months afterward he had some vertigo complicating the gastric pain. Finally, for eighteen months past, the gastralgia has yielded, but has been followed by a continued sensation of vertigo, a fixed pain in the nape of the neck and between the shoulders; sensation of falling forward when the patient walks up or down any incline; sensation of a soft body, like a cushion, under the feet during the walk; fear of an imminent death; sudden inclination to commit suicide.

The second patient was a physician who experienced all the symptoms of a cerebal congestion; cephalalgia, troubles of the intellect, incomplete amnesia, impediment of speech; the patient, being gouty, had fear of a metastasis; but a few articulations of tenia having been passed, the diagnosis was made, and, as in the preceding case, a dose of kousso, by producing the expulsion of a tenia, caused at the same time all his symptoms to to disappear.—*New York Medical Journal.*

*Treatment of Delirium Tremens.*—Concerning this vexed question, Dr. Murchison says (*London Lancet*), in regard to—

1. *Alcohol.*—He allows none, except in cases where there is evidence of fatty heart, or an intermitting pulse, or some special complication, as phthisis. He has never seen any bad consequences from suddenly and completely cutting off the supply of alcohol.

2. *Food.*—Mild cases are often cured by good nutriment and abstaining from stimulants; but sleep will not follow this practice in severe cases, while in not a few bad cases there is congestion of the liver and stomach, and food of all kinds is rejected.

3. *Opium.*—In many cases opium acts like a charm in speedily putting an end to the disease; while in others it fails entirely in inducing sleep, or may aggravate the symptoms, or even cause convulsions or coma Is there no explanation of this difference? Is it possible to say when opium is likely to suc-

ceed or not? or must we, from being uncertain of the result, abjure the use of it altogether? He thinks an explanation of the difference is to be found in the state of the kidneys, as indicated by the characters of the urine. Wherever the urine contains albumen as the result of recent congestion, or old disease of the kidneys, opium is almost sure to fail, and even prove injurious; and accordingly it is a good rule never to give opium until an opportunity has been offered to test the urine. But when the urine has been ascertained to be free from albumen, opium may be given without fear, and usually with the best results. It is best to commence with a full dose, and give a smaller dose every three hours afterward until sleep ensues. When the skin is dry, or the patient much excited, combine the opium with antimony in the manner recommended by the late Dr. Graves.

4. *Digitalis* is of undoubted power in the treatment of delirium tremens, and is particularly indicated in cases where the urine is scanty or contains albumen, or where the patient is very excited. He has known it to act most beneficially in cases where opium had failed. The large flow of urine following its use makes it probable that it assists in the removal of deleterious matter from the blood. From fifteen to thirty minims of the tincture may be given with or without carbonate of ammonia, every four hours.

5. *Bromide of Potassium.*—In severe cases he has not found it alone of much service in securing sleep, although it has seemed to act beneficially in moderating active delirium or mental excitement.

6. *Hydrate of Chloral* is a remedy for inducing sleep which is particularly applicable to those cases where opium is contra-indicated. It does not, like opium, interfere with elimination by the kidneys. One caution is necessary with regard to it. Not only in delirium tremens, but in other diseases, the first action of the chloral (like that of an insufficient dose of chloroform) is exciting rather than sedative. You must not on that account infer that it is acting injuriously, for a second dose will

often produce the desired sleep. The best way to give it is in doses of half a drachm every two or three hours until sleep results.

*Function of the Prostate.*—Dr. Kraus, editor of the "Vienna Medical Times," says that he believes that he has discovered some essential points relating to the function of the prostate, but will, at present, only make some preliminary statements that he thinks will be found to deserve attention.

1. The seminal fluid, as long as it remains within the testes, vesicles, and other seminal passages, is colorless and scentless, being in appearance exactly like fresh honey while deposited in the comb; and in reäction it is neutral.

2. Only when it has quitted the passages and arrived in the urethra does it acquire its white color and its peculiar faint smell.

3. During its passage through the prostatic portion of the urethra, the prostate empties out its fluid, colors the semen white, and confers upon it the faculty of coagulating when exposed to the air (alkaline reäction). Semen taken from the seminal vesicles does not coagulate, but remains clear, colorless, and scentless.

4. The spermatozoa, in the absence of the prostatic fluid, cannot live in the mucous membrane of the uterus of mammalia; but with its aid they may live for a long time in the uterine mucus, often more than thirty-six hours.

From the above the conclusion may be drawn that the prostatic fluid exercises an unlimited influence on the viability of the spermatozoa, sustaining it when endangered by the secretions of the mucous membrane of the uterus.

This is undoubtedly the case with those species of animals which possess a prostate, and he intends next to extend his investigations to those species which are destitute of this.—*Med. Times and Gazette.*

# CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

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LESSONS FROM THE MEDICAL CLINIC AT THE "HOPITAL DE LA CHARITÉ," given by S. JACCOUD, Assistant Professor to the Faculty of Medicine at Paris; Physician to the Hospital St. Louis; Chevalier of the Legion of Honor; Corresponding Member of the Royal Academy of Science of Lisbon, and of the Medical Societies of Berlin, Vienna, Wurzburg, etc. Containing twenty-nine wood cuts and eleven chromo-lithographs. [Translated by Dr. J. D. JACKSON, of Danville, Ky.]

## FIFTEENTH LECTURE—PROGRESSIVE NERVOUS ATROPHY.

Differential Diagnosis of this Disseminated Paralysis from Muscular Atrophy—Discussion of the Seat of the Paralysis—Encephalon—Marrow—Spinal Nerves—Concerning the Precise Sense of the Expressive, Peripheral Nerves—Impossibility of a Diagnosis between a Lesion of the Roots of these Nerves and a Lesion of their Terminal Branches.

Progressive Character of this Disseminated Paralysis.

At our last lecture we gave you the history and symptoms of progressive nervous atrophy; we proceed now to give the methods of diagnosis, etc.

Such was the state of our patient on his arrival into hospital. He was affected then, to resume, with an apyrectic malady of six weeks' duration, characterized by some pains in the extremities of the limbs, and by a loss of motorial power in the forearms and hands, the legs and feet; this powerlessness, which condemns the patient to absolute repose, has not struck the totality of the regions which it occupies; it is confined to certain muscular groups; the muscles thus affected, are all more or less atrophied, they have all lost their elective contractility and their reflex motility; finally, the irregularity which the seat of the symptoms presents, is only apparent, since they are rigorously localized according to the anatomical distribution of certain nervous cords. The sensibility is altered to a much less

extent; where it is affected, it is abolished in all its forms, and these disorders have the same anatomical localization as the troubles of motility.

Having now recognized in their minutest details the clinical characteristics of the case, we are able to proceed to the discussion and the diagnosis. The first question to resolve, is the following, which ought always to be put in cases of this kind; is this a paralysis properly so called, is it a muscular atrophy with consecutive loss of motor power? Revert to the study which we have made of this last malady, and you will see that the response is most easy, thanks to the admirable clearness of the phenomena which we have beneath our eyes. No, this is not a muscular atrophy, and for four reasons, all four of which are peremptory. We are in possession of circumstantial evidence regarding the début of the accidents, and we know that the difficulty, or the motorial inertia, has constantly preceded that which the patient called the emaciation of the parts; that is the first argument. Certain muscles are inert, although they still present a volume sufficient for efficacious contraction; this is the second argument. All the atrophied muscles, those which are least so, as well as those most so, have lost their electrical contractility. A third argument, which, like the two first, is sufficient alone to eliminate progressive muscular atrophy. The disorders are strictly grouped, according to the distribution of the nerves; a fourth and last argument, which comes in happily, joining the other three.

The cause of the akinesia is, then, not in the atrophy of the muscles, it is in the nervous system, it is not a commencing muscular atrophy, it is a true paralysis, and we ought to seek in some part of the nervous system for the seat and the cause of this paralysis. Assuredly it is not in the encephalon; not only does the patient present no symptom of aberration of intelligence and sense, but all the phenomena which we have established in him are incompatible with the idea of a paralysis originating in the encephalon; I would point out to you among others the distribution of the disorders to the extremi-

ties of the four members, the rapid atrophy of the muscles, the loss of reflex movements, and of electrical contractility. The encephalon being out of the question, it is clear that the paralysis has its origin in the spinal apparatus. But this apparatus is composed of the marrow and the nerves departing from it; it behooves us then to determine if the cause of the paralysis is seated in the marrow itself, or in the peripheral spinal nerves. It is in the discussion of this, gentlemen, that the interest of the case resides. Very well! You can rest assured that this paralysis is not under the dependence of the marrow; hold this as certain, it is as sure as if we had the organs under our eyes. There is not a symptom present in the patient which does not demonstrate this proposition, and furthermore, the absence of certain phenomena, impose, categorically, the same conclusion.

The paralysis having originated definitely in the brachial and sacral plexus, it is necessary in a hypothesis of an alteration of the marrow, to admit in this organ a limited modification of the original cellules of the nerves which form this plexus; but as the paralysis only occupies certain of the branches, it is necessary to admit besides this, that this modification, because of, I know not what elective affinity, implicates only certain ones of these cellules; that which has been begun has been very extraordinary, and has passed the limits of possibility; very well! this being insufficient to account for all the peculiarities of the case, it is one which constitutes not only a difficulty, but a veritable impossibility for the localization of the paralysis in the spinal marrow itself; I wish to speak of the different state in which the divers branches of the same nerve are found; thus, on the right the cubital nerve is intact, with the exception of the deep branch, which distributes itself to the three last interrosseous spaces; on the left the branches of the median are totally paralyzed, but that of the superficial flexor is only incompletely so; on the left again, all the branches of the cubital are affected, excepting those distributed to the interrosseous muscles. We know nothing of the excitability of the median and cubital nerves of the arm,

because they give off no branches except the radial, which, furnishing successively the arm, forearm, and hand, presents on the right a most interesting condition; the branches to the forearm and hand are paralyzed, but the branches higher up, furnished to the triceps-muscle, are perfectly intact. Likewise in the inferior members, the sciatic, internal and external popliteal, are entirely paralyzed, but the trunk of the sciatic, from the bifurcation of which they originate, is not at all so; briefly, not only are the interested plexuses not involved in their entirety, but the divers branches of the same nervous cord are not equally affected; the same nerve which in the extremity of a member presents a complete paralysis of all its branches, possesses in its higher branches an excitability almost entirely normal. This distribution of the disorders upon which I designedly insist, in order that you may fully seize the characteristics and the signification, this distribution of the disorders, I say, is irreconcileable with the idea of an alteration of the marrow a paralysis thus disseminated cannot be localized, excepting in the spinal nerves themselves. Other reasons besides dictate this conclusion. Thus the precocious atrophy of the muscles, and the loss of their electrical contractility are phenomena not less demonstrative. An observation of the patient for fifteen days has shown us repeatedly that when a new muscle comes to be paralyzed, it soon commences to diminish in volume, and that four or five days thereafter it no longer completely reäcts under the electricity; modifications as rapid, it is true, can be observed in the lesions of the spinal marrow, but under what condition? Under the condition, never forget it, that the lesion has been a disorganization *in its totality* of the segment of the marrow, whence the muscles derive their nerves; if it affects the lower limbs, the precocious atrophy and the loss or rather the diminution of electrical contractility in four or five days are not observed, excepting in case of *total* disorganization of the lumbar segment; it is necessary for the lesion to be very profound to separate the nerves and muscles of the marrow. Now, we cannot here admit a similar alteration, since the special distri-

bution of the paralysis shows us positively that the segment is not attainted in all its elements. On the other hand, when a spinal nerve is so profoundly affected as to have paralysis to follow, the precocious atrophy of the muscles supplied by this nerve, the wasting, then the loss of their electrical contractility in some days is the rule, because the lesion of the nerve is equivalent to a complete separation of muscle and marrow; as Marshall Hall has said, the spinal influence then fails the muscles, they atrophy soon, and lose their contractile aptitude. Finally, with a paralysis of such a nature that it has compromised from the start the nutrition and contractility of the muscles, we have no trouble in either micturition or defœcation, any alteration in the integuments of the sacro-lumbar region, any painful irradiation, any girdling pain, and these negative phenomena, are not less of the character of the proof than the positive symptoms before considered. Our case is typical, each of the regions paralyzed offers us in perfect completeness, the phenomena which result from the experimental or traumatic section of the nerves emanating from the marrow, and we can conclude of a certainty, that we have to do with a paralysis the cause of which is seated in the spinal nerves, that it is a paralysis of the peripheral nerves.

But be on your guard, as to the exact sense of the word peripheral; a nerve whether cranial or spinal, is called peripheral, when it has emerged from the nervous centre giving origin to it; going out from its place of emergence, indeed, whatever may be the point at which the nerve may be affected by the paralysis, the symptoms are the same; they only differ in the extent of their distribution; but it is the same precocious muscular atrophy, if the nerve contains sympathetic nervous fibres, and the same absence of reflex movements. Just as in viewing the peripheral portion of the facial, for example, it extends from the bulbar emergence up to the terminal branches of the nerve; likewise for the peripheral portion of the spinal nerve, so it extends from its medullary or spinal emergence, up to the limit of its distribution. It is in this precise sense, that I employ the expres-

sion peripheral, and when I tell you in speaking of our patient, that he is affected with a paralysis of the peripheral nerves, I intend to say by that, that the spinal nerves are paralyzed in some point of the tract which is embraced between the spinal canal and its termination.

Can we go further in the diagnosis, and determine exactly what is the point of this long tract which is affected? Yes, at least in a certain measure. Lend me all of your attention, if you please. The paralysis does not affect all of the branches furnished by the nervous cords in the sphere of which they are the seat; I have said this to you many times, and I repeat it to you still again; beside the paralyzed branches, the median is sound, so is the cubital, and the same is true for the sciatic; this alone, renders it certain, that the paralyzing cause struck the spinal nerves in a point where the nerves' branches are separated and isolated one from another. This consideration is of an absolute value. Now, there are but two regions in which the branches of the spinal nerves are disassociated in such a manner as to be susceptible of having separate lesions affecting them; one of these regions comprises the nervous roots from their emergence from the marrow, up to their fusion into a nervous cord; the other region embraces the branches resulting from a division of the nerve. It is in these regions alone that certain branches of the same nerve can be altered to the exclusion of the others; consequently the cause of the disseminated paralysis which exists in one man, resides in the spinal nerves, either on a level with their roots, or on a level with their branches of division, in the continuity of the members. Such is the conclusion to which an observation and vigorous interpretation of the symptoms conducts us; but the clinical phenomena do not furnish anything, permitting us to choose between these two alternatives; whether a spinal nerve is involved in the first part of the peripheral tract, that is to say at the roots, or in the last part of its course, that is the branches, the symptoms are identically the same. We need not stop then for the solution of this last question. If I should decide in the

actual case, for an alteration of the terminal branches, rather than for a lesion of the roots, it is solely because of the frequency of difference of these two orders of facts. Both are rare, it is true, but not both to the same degree; there is in science as we will see, at least one positive example of disseminated paralysis of the four members by a lesion of the peripheral branches of the spinal nerves; but there does not, to my knowledge, exist a single case of the kind induced by a lesion of the roots of the nerves, along with integrity of the spinal marrow. The only fact at all approaching this hypothetical case, is very far from touching it; it is that which has been reported by Benjamin, of Hamburg.* A man sixty years of age, after suffering pains in the lower limbs, was affected with paraplegia and retention of urine seven years before his death. On opening the vertebral canal, there was discovered an intumescence of the posterior part of the meninges in the lumbo-sacral canal; this sac once open, there was exhibited a tumor seated upon the *cauda-equina* six centimetres from its termination. This tumor, of the size of an olive, and three centimetres long, embraced many spinal nerves; others were penetrating into its thickness, and presenting appreciable alterations even before having touched the morbid product. There was then a good example of paralysis of the lower limbs, by compression of the spinal roots in the interior of the vertebral canal, but there was no disorder of the upper limbs.

In this situation, between a possibility which has never been yet realized, and an hypothesis which observation has justified, I can no longer hesitate, and here admit a paralysis of the terminal branches of the spinal nerves.

I would add this as a very important fact, that the paralysis is progressive. It is only eighteen days that we have observed the patient, and already we have been able to perceive modifications in his state, leaving no doubt of the justness of this epithet.

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* Benjamin. Neurom innerhalb der Rückenmarkshäuti (Vischons Archiv., XI, 1857).

In the beginning, the electrical reäction of the adductor muscles of the thigh, was perfectly equal on the two sides; to-day it is much diminished on the left, as also in the buttock muscles. New branches of the left sacral plexus are evidently touched; the gluteal nerves and the obturator nerve appertaining to the lumbar plexus are affected. On the right the alteration of the lumbar plexus reveals itself clearly, by the diminution of electrical contractility of the crural triceps and the large muscles of the abdomen. On the two sides, the branches emanating from the trunk, of the sciatic also, are commencing to be affected; during the first days, the flexion of the leg upon the thigh was easy and energetic. The contractility of the biceps muscle, the semi-tendinosus and the semi-membranosus was perfectly good; to-day those muscles respond badly to electricity, and the movement of flexion is slow and incomplete. In the upper limbs, the only change is in the paralysis of those of the interosseous muscle, which had until now preserved some motility. The disorders are extending themselves, that is certain; the paralysis is gaining ground from the extremities towards the centres, and it is therefore, a progressive paralysis of the spinal nerves.

I have carefully inquired into the antecedents of this man in order to seize upon the probable cause of this paralysis; now he has never had an acute disease, nor has he been a hard drinking man; he has never been affected with syphilis, nor has he been a worker in lead; but for the last three years he has dwelt in lodgings cold and damp, situated on the ground floor, and in the absence of other positive knowledge, I am disposed to attribute to the influence of prolonged humidity the accidents which are developed in this individual. This condition has already been invoked by Abercrombie as a cause of more or less generalized paralysis.

Independently of the interest which it presents in a diagnostic point of view, and the physiological interpretation of the symptoms, this case contains within it information of another order; this I will endeavor to put in a clear light at our next

conference; and with this end in view, I will study the probable state of the spinal nerves in our patient, and will show you the affinities which this observation presents, with certain facts which have been published under different titles; after which I will seek out the most just name for this pathological complexity.

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## PROCEEDINGS OF SOCIETIES.

**"Etsi non prosunt singula, juncta juvant."**

### Convention of Superintendents of Insane Asylums.

The twenty-third annual meeting of the Association of Medical Superintendents of American Institutions for the Insane, was held in the Virginia Hotel, in Staunton, in June. The meeting commenced on the 15th, and continued until the 18th.

Dr. Kirkbride, of Philadelphia, President, and Dr. Curwen, of Harrisburg, acted as Secretary.

On the first day Dr. Curwen read a report upon the treatment of the insane in private institutions, in which he took occasion to express his contempt for certain Legislatures in passing rules and regulations for the government and treatment of maladies of which they were totally ignorant.

Dr. Ray presented an important paper on the law of insanity, in which were described several recent judicial decisions, showing most gratifying progress in the right direction. The decision of the Chief Justice of New Hampshire, in a recent criminal case, was regarded as embodying really correct law in respect to insanity as an excuse for crime. All questions of insanity, including tests and definitions, are questions of fact to be determined by the jury, and the duty of the Court is not confined to the simple instruction that if they find the prisoner to have been insane when he committed the act, and that the

act was the offspring of such disease, they must acquit him on the ground of insanity. After an amusing discussion about the treatment of the insane in Massachusetts by ducking and confinement in high pressure water-tanks one hundred years ago, the scientific conversation was adjourned until 9 o'clock Wednesday morning.

On Wednesday, a resolution by Dr. Graham, of Texas, favoring a judicious system of religious worship in insane asylums, produced an animated and general discussion, particularly as to the kind of religion and the manner of its preaching, it being held by Dr. Landon that exciting sermons would tend to increase the malady of the patients.

Dr. Stribling advocated the resolution—prefered in State institutions at least that the services be performed by the neighboring clergy, rather than a resident chaplain. This had been the plan at Western Lunatic Asylum for more than one-quarter of a century. He had seen much good result from such services, and not in a single instance any permanent harm.

Resolutions were adopted favoring regular religious service in hospitals, the choice of and authority over chaplains to be vested in superintendents.

A paper by Dr. Workman, of Toronto, on the phases of insanity in females and perversions of mind, occasioned by disorders of the system, was debated at length, as was also Dr. Ray's report of the day before.

On Thursday, by invitation of Mr. Abram Mohler, the members paid a visit to Weyer's Cave.

On Friday morning Dr. Ray read a paper on the abnormal condition of mind occurring in cases of fever, acute inflammation, paralysis, etc., where the patients, apparently perfectly sane, declare afterwards that they do not recollect what they did. The paper, after discussion by nearly all the members, was ordered to be printed.

The following resolutions of thanks were adopted:

The Association of Medical Superintendents of American Institutions for the Insane, now about to close its twenty-third an-

nual session at Staunton, Va., and greatly appreciating the courtesy and hospitality that have attended their sojourn here,

*Resolved*, That our thanks are due to the managers of the Western Lunatic Asylum for the opportunity of examining, at our leisure, the arrangement and management of this old Institution. We are grateful to find so many appliances for the comfort and enjoyment of the insane, and such abundant evidence that humanity and liberality characterize the administration, as shown not only in the beautiful grounds and ample airing courts, but in many unobtrusive, internal comforts which transform the Asylum into a home. We recognize in it all the hand of the experienced, intelligent, conscientious and devoted Medical Superintendent, Dr. Francis T. Stribling. A service of more than one entire generation has not dimmed his vision nor abated his ardor. We congratulate the managers of the Asylum and the people of this old Commonwealth upon their singular good fortune in having, for so long a period, enjoyed the benefits of his labors. May he be longer spared to devote his matured experience and ripened judgment, with Christian fidelity, to the best interests of the insane, and to the honor of the Old Dominion.

To the managers and teachers of the Asylum for the Deaf, Dumb and Blind for the welcome privilege of witnessing the exercises of the pupils in the various departments—an exhibition of rare interest and excellence for their abundant and elegant hospitality.

To Mr. Abram Mohler, proprietor of Weyer's Cave, for the opportunity of seeing that great natural curiosity under the most favorable circumstances. We are indebted to him for a day of recreation and enjoyment, the like of which most of us have never before experienced, and which we shall long remember with peculiar pleasure.

To Messrs. Peytons & Co., proprietors of the White Sulphur Springs, for an invitation to visit that attractive watering-place and pass a few days there as their guests—an invitation which we find it hard to decline, but which we regret we cannot accept consistently with the full execution of the purpose which has called us together here.

To the presidents of the various railroads of Virginia for their generous offer to pass the members of this Body over their several roads at one-half of the usual rates.

To such of the good citizens of Staunton as, recognizing the fact that our specialty knows no distinction of time nor place,

of country nor condition, but is in accord with the highest humanity of our nature, have extended to us the warm hand of welcome, and have made our visit here an enjoyable fact and a pleasant memory.

To Mr. Frederick Scheffer, proprietor of the Virginia Hotel, for the use of a parlor for our meetings free of charge, and for his good-natured and constant efforts to secure our comfort while guests at his hotel.

To the managers of Western Lunatic Asylum for their courteous and generous attentions and hospitality, and to our old friend and associate, Dr. Stribling, for his untiring and most successful endeavors to make our first visit to Staunton profitable and pleasant in the highest degree. We bid him good-bye with regret, and in the hope that, for years to come, we shall enjoy his welcome presence at our annual assemblies.

For the Committee,

C. A. WALKER, Chairman.

On motion of Dr. Nichols, the resolutions were passed unanimously and by *acclamation.*

Dr. Stribling rose and said:

Mr. President, I feel deeply the compliment paid by your resolutions to the citizens of my native town, to the State charities located in their midst, and to myself individually as a member of your specialty. I cannot rrust myself to say more.

The Body then adjourned to meet in Hartford, Conn., on the third Wednesday in June, 1870.

## ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

MONTGOMERY, ALA., July, 1871

*My Dear Doctor:*

A variety of accidents have prevented my earlier compliance with a promise made to you, when leaving Louisville on my way to California, that I would dot down my "impressions by the wayside." At 11 o'clock, on the night of the 24th of April, I

left Louisville via Indianapolis, St. Louis and Kansas City. We were soon crossing the river over one of the most magnificent iron bridges in the United States. It is the finest bridge between Louisville and San Francisco. I awoke on the morning of the 25th at Terre Haute, Indiana. Crossing the Wabash river, we were soon speeding along, over a level farming country, not very rich, or at least to my eye, not comparing with the rich lands of Alabama. The landscape in the early morning was very refreshing to the sight. The smooth fields of wheat stretching away as far as the eye could reach, fringed with the budding trees and occasional large tracts of woodland. At 2 o'clock P. M., we arrive at St. Louis, and cross the Mississippi river on a steamboat, the bridge not being completed. St. Louis did not impress me favorably. It has not the clean and comfortable appearance of Louisville, and there is no hotel that can be compared to the Galt House. For the dinner at the Southern Hotel, I paid one dollar and a half, and it was the meanest dinner that I ate on the route. I left St. Louis at 5 P. M., via the Missouri and Pacific railroad, for Kansas City. This road runs through a magnificent country, and we arrive at Kansas City at 6:30 A. M., on the morning of the 26th. Taking an omnibus we traversed the streets of this far-famed place for the Union dépôt. Here trains seemed to be leaving every ten or fifteen minutes. Whilst waiting for my train, my mind wandered back to the time when news from Kansas City was looked for with as much anxiety as we did a short time since for news from Europe. It was a place then of a few shanties; now it is a city of twenty thousand inhabitants. Taking the Kansas City, St. Joseph and Council Bluffs railroad, we were now crossing the Missouri river on a fine iron bridge, and running directly up the east bank of the river, over the Missouri Valley, where the land is as rich as it can be. The river, however, is very treacherous, and is constantly changing its bed, washing away quantities of this rich alluvial soil. At 11:30 we pass St. Joseph, a city that has been founded within the last ten years; now numbering thirty thousand inhabitants. It is beautifully situated, with the

hills rising above and surrounding it. Five or six railroads centre here, and this fact accounts for its rapid growth. Travelling for about two hundred miles, first up the Missouri Valley, then over a perfectly level prairie, partly through the State of Iowa, we reach first Council Bluffs, where five or six railroads come in from the East; we cross the Missouri river in a steam-tug, enter Nebraska at about 8 P. M., are at the Coggins Hotel in the renowned city of Omaha. This place has also sprung from nothing in the last decade, and now numbers twenty thousand inhabitants. We had to lay over until 12 o'clock next day, and be swindled at the rate of four dollars per day, nothing fit to eat, and nothing more interesting than muddy streets to look at. In going to Omaha the traveller should be certain to always get on the express train. You travel faster and make close connection with the Union Pacific railroad, and avoid lying over for eighteen hours at Omaha. I think it is also better to take the Chicago route, for although it is a longer route, you make the same time; are more certain of making proper connections, and pay the same fare. I believe, from all I could learn, it is decidedly the most pleasant route. If you wish to go through the State of Kansas, you can take the Kansas Pacific railroad from Kansas City, and strike the Union Pacific at Cheyenne, making the same time that you do through Omaha.

Omaha is a dirty, disagreeable-looking place, though it is bound to be a large city; five or six railroads already converge here, and it is supported by a good back country, which is rapidly filling up. There is only one train per day from Omaha to San Francisco, and this leaves daily at 12:30. On getting aboard of one of Pullman's magnificent parlor-coaches, I soon found myself in the midst of a pleasant party of travelling companions of both sexes. As we were all doctors, and the ladies doctors' wives and daughters, we were soon on agreeable terms. The whistle blew, and going at the rate of twenty miles an hour, we were soon in the Platte River Valley, which is a dead level; no trees or shrubs to gladden the eye, and no water, except an occasional glimpse of the Platte river (to our left), which seems

crawling slowly along on top of the plain. It is a shallow stream. To the right the plain seems to extend out to the very horizon. A mud-house is seen once in a while, and at longer intervals one built of wood. We pass Lone Tree, and recognize a small village of the plain, which in ten years may rival Omaha. Farther back we passed another point, which Mark Twain says is the centre of the United States, and that the capitol ought to be moved there. It is now a city of two or three houses and a windmill. It is now night, and we awaken on the morning of the 27th in a perfectly barren country, the Platte river still in sight, and to our right a slight show in the way of hills. Later in the Spring, I suppose, this part of the country is covered with grass. Herds of antelope are now seen, which is a great relief to the monotony of the scene. They are beautiful little animals, resembling the goat, but much handsomer. They seem to be getting accustomed to the cars, and frequently stop to take a look at the train as it moves along. Farther on we strike the Prairie-Dog settlement, which extends for miles along the road. They are very peculiar-looking animals, about the size of a ground-squirrel. They come out of their little holes, sit perfectly erect on their haunches, and look very wisely at the cars. We passed over the buffalo country during the night, consequently did not see any of them.

The appearance of the country is now changing, and we begin to see hills covered with snow. As we approach Cheyenne, the snow is quite plentiful along the railroad track. At 11 A. M. on the morning of the 28th, we see the first snow fence. Where the country is simply undulating, they merely build two or three lines of plank fencing some little distance from the track, so as to catch the drift and prevent its collecting on the road-bed. Farther on the whole track has to be covered over for miles; sometimes in a continuous stretch, and at first you imagine that you are passing through a tunnel. We have passed over miles and miles of dreary plain without any sign of habitation. At long intervals, however, we come to a few houses and a station, supported, I suppose, by the railroad. At 12 M. we got the first

sight of the Rocky Mountains. At first I thought their snow-capped summits were nothing but fleecy clouds floating in the distance. At 12:40 we stop for thirty minutes at Cheyenne, in the Territory of Wyoming. We get a good dinner of antelope steaks and fresh salmon. Cheyenne is a considerable town; it has two dailies, and I suppose all the modern improvements. We caught a glimpse of the Governor of the Territory, quite a young-looking man; also a number of United States soldiers. This is an important military station. At one time there were six thousand inhabitants, and, as some writer remarked about it, it was a red-hot town. It now numbers only three thousand, the balance following the road, as it progressed, further on. Cheyenne is six thousand feet above the level of the sea, and is five hundred and sixteen miles from Omaha. It is a distributing point for the Territories of Colorado and New Mexico.

The whistle blows, and we are off again. The country now is more pleasing to the eye, is slightly undulating, and is said to be a fine grazing country. We cross beautiful mountain streams occasionally, and we have two large engines pulling us up the mountain at the rate of ten or twelve miles an hour. We cross the Black Hills, and see the snow-fences built of stone. Huge masses of gray granite, piled up in strange confusion, are seen on all sides; rugged mountains farther off covered with stunted pines; vapory clouds floating above; the high mountain peaks covered with snow and glistening in the sun; the whole making a beautiful panorama on each side of the road. Gradually we ascend, until we find ourselves on a plateau, and now we are at Sherman, the highest point on the road—eight thousand two hundred feet above the level of the sea. We remain here only fifteen minutes; long enough for the younger members of the party to play snow-balling, and for some of the older ones to eat snow at this high altitude. To the south we see Pike's Peak, and there it looks to be only a few miles distant; we find that it is one hundred and sixty-five miles away.

To the left tremendous boulders of volcanic rocks are in view; no doubt cast up in ages past by one of Nature's grand

convulsions. This is one of Nature's wildest regions, and any one wishing to spend his time in solitude, contemplating the sublime works of Nature, could find no better place than this region surrounding Sherman. Beautiful mountain streams, full of fine fish, are here, while the mountains are said to abound with game of almost every variety. Soon after leaving Sherman we cross Dale Creek, on a bridge six hundred and fifty feet (650) long, and so high above the stream that this looks like a mere thread far below us. The bridge is a marvel of airy beauty and strength. The view is now constantly being interrupted by the snow-sheds, which cover the track for miles. The breathing now becomes hurried, though I feel perfectly comfortable, and am able to stand on the platform of the cars, even without an overcoat; the snow is on all sides of us, and icicles are hanging in countless numbers under the snow-sheds. Running parallel with the railroad track, we see the old emigrant road over which travellers were wont to toil over the mountains, on their way to the Golden Pacific. Forty-four miles from Cheyenne we are passing over a plain where people seem to be living, for we see a freshly-plowed field, and a large herd of sheep, attended by the shepherd and his dog. To the West and North the mountains seem to be rising higher and higher, until their snow-capped peaks lose themselves in the clouds, which seem to embrace them fondly in their vapory folds. We now see the Red Buttes, a range of red sandstone rocks, which stand out on the level plain, the Black Hills forming a beautiful background to the picture. The rain has cut them into all kinds of fantastic shapes. You see men and women, castles, temples, minarets, and mosques, until the imagination is almost wearied with the strange fancies which crowd themselves upon it. Some of these rocks rise a thousand feet above the level land.

At 6 P. M., 29th, we reach Laramie City, which is quite a nice little town. There is a large hotel here, well kept, and I should think the place would be a delightful summer retreat Two miles to the left is the Laramie river. Thirty minutes

rest; we have a first-rate supper, and then we are off again.

Soon after leaving Laramie, and just at the witching hour of twilight, a most pleasing incident occurred. Our car was furnished with a fine parlor-organ, and its sweet tones, accompanied by gentle voices of females, soon filled the car. "Sweet Home" was sweetly played and sung. This occurred whilst the train was in motion, and we were almost on top of the Rocky Mountains, where only a few years since nothing was heard save the wild whoop of the Indian. What an age of progress this is, and what a great and progressive country we are living in! The music produced a holy and calm feeling in all of us, and those who had left their loved ones behind, were carried back in thought to their homes, some of these over two thousand miles distant.

Night again closed around us, and we take our respective berths and sleep as calmly as if at home. This is a most magnificent road; well built and carefully managed.

The 30th came, and the first thing that greeted our sight was the beautiful range of mountains called the Wahsatch, their summits covered with snow and shining in the bright morning sun. We are now crossing an alkaline desert or plain, the surface of the ground looking as if covered with frost, and nothing growing upon it except the wild sage. It looks very much like the common garden sage, but it is stunted, and the leaves are smaller and whitish from the alkaline deposit. In fact the whole atmosphere is saturated with salæratus. No living creature in sight, no bird, beast, or flower, to relieve the eye. At long intervals we pass a United States fort. Early in the morning, however, we are slightly relieved by getting to Green river. What was a little remarkable, Major Rowels, who was thought at one time, a year or two since, to have been lost on an exploring expedition down this river, and who started from this very point, again left the train for another expedition. He is accompanied this time by his wife, and Major Thompson and wife. They were all in high spirits at the thought of the wonders they were to see in the Canyon below. We get a good breakfast at

Bryan Station, and, to use a homely (but vulgar) expression, it comes as near a good square meal, as anything on the road.

Thirty minutes to rest, and we are again going over a continuation of the same dreary sage plain. This is the moss-agate region, and several passengers have picked up the agate-stone at Bryan. When polished it makes beautiful settings for jewelry. Some think this peculiar stone has been produced by Nature photographing the sage plant upon it. We certainly see no moss, but we do see an inexhaustible quantity of sage. The scenery, however, now changes, and a second engine being attached, shows us that we are again ascending a heavy grade. At 12 M. we are on the second highest point of the road. Every few minutes now we pass under the snow-sheds, and the road curves so as to almost curve back on itself. It is a beautiful sunny day, and the rays glance and glisten from the beautiful hill and mountain sides, all crowned with a white carpet of snow. Our second engine is detached, and we find the scenery again changing from the merely beautiful to the grand and wild. We are now seven thousand four hundred and sixty-three feet above the level of the sea. We hurry along, and at 2 P. M. we are at Wahsatch Station, where we stop for dinner. Here the observation car is attached, which is open on all sides, and those who wish to get a full benefit of the grand scenery of Echo and Weber Canyons, take their seat in it. We enter Echo Canyon at Castle Rock, and now find ourselves surrounded by scenery too grand to be described. We are going "down-grade," and we thunder along as if running over a smooth plain. Rugged mountains to our right and left and front; perfectly barren on the right, except a few pines or cedars, whilst to the left, they are covered with green verdure and flowers. To the right they ascend to immense heights, their tops crowned with snow, while small evergreens dot their sides, or hang amid the clefts which extend frequently from top to bottom. Hanging Rock and the old Mormon fortifications are now passed, and we stop for a few moments at Echo City. There all eyes are turned to the left to see the one thousand-mile tree. It is a pine of considerable size, no

other tree near it, and a white board, with one thousand miles painted on it, nailed to the tree. Echo Canyon being left behind, we now dart into Weber Canyon, where the scenery is even grander and more magnificent. The mountains approach so near as to almost meet, and they just leave room enough for the railroad, Weber river, a small mountainous stream, and the old emigrant track. These three things occupy all the vacant place between the mountains, and it seems as though Nature had an eye to this when the Canyon was formed. You look up, and see the mountains frowning down from their immense heights. Far below us we see the Weber dashing and plunging along, while hugging closely to the foot of the mountains, the old emigrant road winds its picturesque way. You even see occasionally a little white-covered wagon with a few cattle, going slowly along, just as the old emigrants did ere the engine's whistle echoed along these mountain sides. The Devil's Slide is now in view; a trough between two high projections of serrated rocks a thousand feet in length, and you think as you pass, that the old gentleman must have delightful slides, and that he takes these frequently; for the rock is worn smooth, as if by the constant use of his satanic majesty.

The ride through this Canyon is delightful beyond description. The day was bright and beautiful, and you look and look, until you are almost bewildered. The mountains assume all sorts of figures; you see the old feudal castle with its lines of defenders; the solemn cathedral, and with a little effort of the imagination, even the priest in his robes. Huge animals are also represented, and at last you have scarcely time to think, so fast do new beauties burst upon the sight. Imagination is almost suspended, and a feeling of awe gradually envelopes you. The feeble efforts of your neighbors to express their feelings in words is irritating. You feel that words are impotent; that the subject is too grand to be compassed by them. You sit still and mute, looking and wondering, as the grand book of Nature is unfolding before your enraptured vision. A devotional feeling gradually steals over you, and the mind humbly lifts itself from this contemplation of Nature's works to Nature's God.

We are suddenly interrupted in our musings by finding that we are rushing through a tunnel, and on emerging from the darkness our eyes behold a beautiful little valley, almost round, all softness and beauty; inhabited and cultivated. It is the first Mormon settlement that we have seen. The Weber river flows along through the valley as gently as if it had not just escaped from its frightful contests with the mountains. We cross it ten or twelve times, when we see it again rushing and foaming in its efforts to cut its way through the mountains, which seem to entirely obstruct any farther progress forward. Finally it rushes through Devil's Gate, and we dash across it again; then through another tunnel, and now we get our first sight of Salt Lake Valley. The first thing that caught my eye on getting clear of the tunnel was a peach tree in full bloom. We have changed, within the last fifteen or twenty minutes, from rugged mountains to a valley blooming with flowers and verdure.

We now approach Ogden, the terminus of the Missouri and Pacific railroad, and the beginning of the Central Pacific. Ogden is a city of five thousand inhabitants, mostly Mormons. It is distant thirty miles from Salt Lake City, to which place it is connected by a railroad built and equipped by Brigham Young without any aid outside of Utah. I stopped at Salt Lake City on my return, but as it is more convenient to describe it now, we will get aboard the Salt-Lake train. A run of two hours and a half through a rich valley, well cultivated, dotted with villages, and we are at the city. We have been in sight of Salt Lake the whole way. We put up at the Townsend House, and with a pleasant party of friends, we are now ready for sight-seeing. The city is laid out with great regularity, the streets running East and West and North and South. The people are polite and communicative. They take a great pride in their beautiful little city. A little running brook laves the margin of each sidewalk, which is bordered with grass, and is quite refreshing to the eye, replacing, acceptably, the filthy gutter. The houses are not fine, though they are substantial; built either of adobe (sun-burnt brick) or wood. Large gar-

dens, filled with fruit trees, are attached to almost every house. We go first to the tabernacle, a large building with an oval roof, capable of seating twelve thousand (12,000) people. It is very plain inside; the great attraction to me was the grand organ, which is not yet complete. It has been built entirely in Salt Lake; in fact, all the material has been furnished here, except one pipe, which was imported from England. It has already cost one hundred and fifty thousand dollars. It will be worked by water-power when it is completed. The builder of the organ kindly consented to play for us, and I am sure that I was never more impressed by music than I was when the grand, solemn tones of this magnificent instrument came swelling forth, filling the immense building with a flood of sweet harmony. Next we called at Mr. Young's house; his offices, houses, etc., are all together, and occupy a whole square. The whole establishment looks almost painfully plain. He soon came in, and instead of an old man bowed down with care and domestic troubles, we found an extremely pleasant-looking gentleman; well preserved, and apparently not over forty-five years of age, though he says that he is fifty-five. He is of light complexion, hair and whiskers rather red, and a large and well-shaped head upon broad and square shoulders. I suppose he weighs about one hundred and fifty (150) pounds. My impression from his general appearance was, that he was a man of great native intellect, indomitable will, and entirely self-reliant. I doubt whether he ever consults any one as to his actions. If he does, I imagine it is for policy, and that he always manages to have his own way about everything. He is the happy husband of sixteen (16) wives, and I do not know how many children. They are now building a temple near the tabernacle. The foundation is already laid. It is to be built of the finest gray granite, at a cost of three million (3,000,000). It will take years and years yet to complete it, but they say that it makes no difference, as it is built as much for posterity as for this generation.

Very rich silver mines have been discovered near the city,

which are attracting many visitors now both to the city and Territory. There are some fine hot sulphur springs near the city. I visited the nearest, and found arrangements for bathing complete. The water is warm enough to feel very comfortable. The climate is delightful, the air bright and balmy, though you can see the mountains covered with snow for nearly the whole year. Twenty-four hours in Salt Lake, and we take the train, and in two hours and a half we are again in Ogden, and are now pursuing our way to the Pacific.

After leaving Ogden, on the Central Pacific, we skirt along Salt Lake for about forty miles. To our right we see the Wahsatch mountains covered with snow. We are now traversing the great American desert. It is a strongly alkaline region, covered with sage, and nothing else; not even a butterfly or a grasshopper seen. After leaving the desert we pass over the Humboldt Valley, which is said to be fertile land, though it does not look so to me. The Humboldt river flows through this valley. I believe we are now traversing the Territory of Montana. Night closes around us.

We awake next morning, and our eyes look out again upon the dreary plain and wild sage; we see no sign of life, until we reach Elko, where we stop for breakfast. Elko is a pretty large town. I do not know what supports it. Many Indians flock around the cars, begging for nickels. They are miserable-looking creatures, and do not look at all like "kings and queens of the forest." Thirty minutes, and we are again travelling rapidly over the same gray sage plain. An immense inland sea must at one time have covered this whole region. How or when it disappeared, we know not. We are now traversing the territory of Nevada, and the eye is now again gladdened at the sight of mountains, which are drawing nearer and nearer to us, while we notice immense boulders of volcanic rocks on each side of the road; some of them a thousand feet in height.

We notice an occasional valley which looks fertile, but we see no sign of anything living. The Humboldt river is to our

left, it looks now like a small creek to me. We find that the alkaline atmosphere that we have been inhaling for the last twenty-four hours has had its effects; our faces and lips are chapped, and our hands are very rough. We dine at Battle Mountain, which derives its name from some Indian battles which have taken place here. A rest of half an hour, and we are going again over the sage plain; it seems to be interminable. The mountains have now failed us, and have dwindled down to hills again, so that we have nothing to relieve the eye. We pass soon a prosperous little town, where we got the first California strawberries that we have seen; they were large and delicious. The name of this town is Winnemucca.

Night begins to draw near, and we are admonished from the change in the scenery that we will soon have left the great Nevada desert behind, and instead, we will have the beautiful Nevada mountains to gladden our eyes.

At 4 o'clock on the morning of the first of May I was awakened by the porter, who informed me that we would soon pass the beautiful Donner Lake, the gem of the Nevada mountains. I quickly dressed, and on looking out, what was my surprise to see, instead of the horrid alkaline plain and stunted sage, snow everywhere. To the left a beautiful sheet of water, calm and placid, in the gray mist of the morning. This was Donner Lake. It is situated upon the top of the mountains, and looks like a bright jewel in a setting of white, fringed with green. The snow covers the ground to a depth of several inches, even now, whilst the green pines, cedar, and fir trees wave their beautiful tops high into the air. This lake is undoubtedly the crater of an extinct volcano. It is three and a half (3½) miles in length by one mile in width. The bottom has never been found; it has been sounded to a depth of seventeen hundred feet. I know of no place that would be more attractive to the tourist or artist than this beautiful region around Donner Lake. Like almost everything else that is beautiful, however, there is a dark shadow resting over this place, and when we look at the calm and placid waters of the lake, we are

reminded of a sad tragedy that was enacted upon its shores.

Some twenty-five years ago a party of emigrants, on their way to California, camped here one night. Among them was a man whose name was Donner, with his wife and four children. The trapper, who was acting as guide to the party, knowing what would be the difficulty if they did not cross the mountains ere the winter snow commenced, urged haste; but Donner not feeling well, and indisposed to leave his cattle behind, some of them having strayed off, refused to advance, preferring, as he said, to recruit before moving on. The night of their encampment on this lake a fearful snow-storm commenced, and in the morning the whole party, except Donner, resolved to go on through the storm rather than risk delay. He was urged to go, but he was stubborn, and would not move. His wife decided to remain with her husband, but at the last moment she concluded to send her four children along with the party. A German also concluded to remain and share the fortune of Donner. The storm increased, and lasted for weeks. Stumps of trees still remain, cut off twelve and fifteen feet above the ground, showing to what depth the snow then fell. When Spring came, search was made for the missing party by their friends who had left them. The German was the only one living, and most horrible to state, it is told that when found, he was feasting upon the frosted arm of Mrs. Donner. Her body was found near by in the snow.

This lake is a more beautiful memorial to Donner than any monument that could have been built in honor of his name by human hands.

Leaving this beautiful spot, with regrets, we are soon in the midst of some of the most beautiful as well as grandest scenery in the world. Unlike the Rocky Mountains, which are grand and solemn, there is a world of beauty surrounding the Nevadas, which renders them indescribably interesting. We feel a pang of sorrow that they are so far away that, comparatively, so few persons can ever see them. Two engines are again at work, and slowly we ascend, until we are seven thousand and

forty (7,040) feet above the sea. We pass mountain upon mountain with fearful chasms between them; the whole covered with pine, cedar, and fir trees, rising from a bed of snow sometimes to immense heights. We now start "down-grade," the descent being nearly one hundred feet to the mile. We are going at a rapid speed, the mountains towering above us. We rush through tunnels and snow-sheds, catching an occasional glimpse of a beautiful mountain stream, which sparkles in the early morning sun. The observation car is again attached, and we rush into it, so as to have a good view as we round Cape Horn, which we are rapidly approaching. At 8 A. M. our train halts on a small projection from the mountain. The mountains are high above us, and we look almost directly down for a thousand feet below us. We are so near the edge of the precipice that some of the ladies, and perhaps gentlemen also, begin to feel quite nervous. Far below you see the river skirting the foot of the mountain, while a beautiful little valley almost round stretches away to the opposite hills. It seems to be completely shut in, and is covered with grass and flowers; and to add to it, you see the cottage in its centre; but whether love dwelleth in it or not, I am not able to say.

We cannot linger long even in this beautiful spot, and the mountain air has stimulated our appetites, and reminds us that breakfast would be most agreeable. The road is very crooked along this portion of the route, winding along so as to secure eligible situations. We breakfast at half-past 8, and two hours more, and we find everything changed. We have passed many abandoned mines, and a few which are still worked. At about 12 M. we reach Sacramento, and find, instead of snow, that the heat is oppressive. Leaving Sacramento, we pass over a good farming and grazing country, or at least it would be if it rained, but everything is burnt up, except where they are able to irrigate. The want of necessary rain and dew must always militate against California as a farming country. Irrigation will have to be resorted to, except near the coast, where the dews are sufficient. I may here remark that California seems to me to

be in a transition state from a mining to a farming country; and I am inclined to think it is not as prosperous as it has been, or as it will be when a thorough system of irrigation is established. At last, just as the sun is going down, we reach the beautiful city of Oakland, five miles from San Francisco. We cross the bay in a steamboat, and are soon at the Occidental Hotel, where we will rest for the next four days.

It has taken nearly four days of continuous travel to reach here from Omaha, and a good hotel is something which is sure to be appreciated after such a journey. I can commend the Occidental as being one of the very best hotels at which I have ever stopped.

San Francisco is a beautiful city of, I believe, only one hundred and twenty thousand inhabitants, according to the census, but the citizens claim a much larger number. The style of architecture, especially that of the wooden houses, struck me as being very pretty. There are many attractive features about the city, but I can only notice a few of the most prominent. The road to the Cliff House is, probably, the most attractive drive about the city, and no one should visit San Francisco without going there. The drive is splendid, the road being constructed out of a peculiar material, which becomes like solid rock. The hotel is built upon the cliffs, right on the shore of the grand old Pacific ocean. You look down from the back porch at the waves dashing against the rocks upon which the house is built. A short distance out in the ocean you see several large rocks rising above the water, with the waves lashing themselves into foam against them. On the top of these rocks and basking in the sun, you see large numbers of seals, or more properly speaking, the sea-lion. They are ugly-looking creatures, and bark a little like a dog. You can hear their voices mingling with the roar of the waves for some distance from the rocks. The largest and ugliest of these creatures has been named Ben Butler. I know not who gave him the name, but certainly every one who visits the Cliff House will have Ben Butler pointed out to him.

Dr. Houston, of San Francisco, was our host and pilot on our visit to the Cliff House, and well did he fill the position. I shall ever remember the day spent with him on the shores of the Pacific as one of the most pleasant of my life. The next day we visited Woodward Garden, which is another one of the pleasant attractions of the city. It was first commenced by Mr. Woodward for his own private pleasure. It is now a public garden, and is a real benefit to the city. The grounds are laid off in a most attractive manner, adorned with shrubbery and flowers, hot-houses, a miniature lake, with sail-boats for children, etc. A large collection of living animals occupy one department of the grounds. Inside of the building you see statues and paintings; every variety of birds stuffed; also reptiles and insects. This garden is well worth a visit from any one visiting San Francisco. Probably the most interesting thing to Eastern visitors to this city is the heathen Chinee. At 9 o'clock one night, with a party of friends and a policeman as our guide, we sallied forth for the Chinese quarter. The policeman seemed to be familiar with all of the Chinese tricks. The first place that he carried us to was a large tenement-house, which he informed us was occupied by about two hundred Chinese thieves. He informed us that they were regularly organized into bands or sqads, and had their regular duties to perform in the way of stealing; for instance, one squad steals chickens, and confine themselves strictly to this department of business. He introduced us to the captain of the chicken squad. These squads never interfere with each other. The rooms that these poor creatures occupy have only one door, which is shaded by a thick curtain; the rooms are small, and there is no method by which they can be ventilated. Bunks are arranged one above the other, with just sufficient space between them for one Chinaman to crawl into. Each berth was occupied by a Chinaman, who had his opium pipe, a small glass lamp, a wooden block for his head, and a little gum-opium rolled round the end of a wire. They heat the opium at the lamp, and when it becomes of sufficient consistence, it is pressed down into a little hole in the

wooden pipe just large enough to hold it. Then the pipe is held to the lamp, and the smoking commences. The whole room is soon saturated with the fumes of opium. We found them in all stages of opium intoxication, from the beatific state to that of profound coma. What was strange to me, they seemed to be of all ages, from extreme youth to old age. We were glad to escape to the fresh air again. It is wonderful how they manage to live in the horrible atmosphere that they breathe every night; yet none of them appeared to be quite old, or to suffer.

Next we went to a restaurant; nearly everything in the establishment was brought from China. Ducks, pressed until they looked like dried salmon, and a variety of other edibles, were hanging about the establishment. These things are prepared in China, and preserved in nut oil. We drank tea with the proprietor, and very nice tea it was.

Next we went to a gambling saloon, and saw, I suppose, the veritable Ah-Sin, for he looked very innocent and bland, as he drew the peculiar Chinese coin to him with a piece of whalebone. He did this with perfect sangfroid, as if it was all right, and I suppose it was, for he certainly understood the game.

Then we went to the theatre; the play we did not understand, but it was certainly interesting to the immense audience, for they seemed to be completely absorbed in their attention to it. I was told that they take a month, and sometimes six months, to complete one play. They enact all sorts of scenes upon the stage, from a birth to a funeral.

Lastly, for that night, we visited a Chinese drug store, and saw a Chinese prescription put up. The prescription consisted of twelve different articles—all roots and barks. It was very carefully prepared, and when finished, the prescription was tied on to the medicine, and forty-five cents in silver received in payment. I felt a little sorry for the poor patient who had to swallow the dose, and should have liked to known what became of him.

Next day I visited the Joss House. It is a rickety old build-

ing; approached through a dirty alley. There were no worshippers present. Three or four Chinamen were walking about the building. I suppose they were the priests. The first things on entering we saw, were three large images, carved from wood and painted; the centre one the largest. In front of the images was a mat for the devout ones to kneel on. Incense was also burning near the images. On either side of these central figures, but separated by partitions, were two other sets of images like the first, but smaller. I was sorry that there was no interpreter to tell us over what the different gods presided. I think there were fifteen images in the building.

I suppose there are forty thousand Chinamen in San Francisco. Some of them are thrifty merchants. They are all educated, and I am told that you cannot find a Chinaman who cannot read and write—in Chinese, of course.

The Association was invited, in a body, to many entertainments. These were accepted and enjoyed in the same generous spirit that prompted their preparation. The visit to the City of Oakland was particularly gratifying and pleasant, the invitation having been extended by the physicians and Mayor of the city. We were received at the dépôt, and then carried in carriages over the city and to the site of the State University buildings, to the Asylum for the deaf, dumb and blind; and then back to the shores of a beautiful little lake, where, under the branches of great water-oaks, a magnificent lunch was prepared. Everything on the table was from California, and was very good. The entertainment will be recollected for many a long day by those who were permitted to be present.

The next day after the Oakland festival was spent in a sail around the Bay. A splendid boat was provided, and everything on it in the way of eating and drinking that could be wished. To add to the charm, a goodly number of the citizens of San Francisco, both ladies and gentlemen, were present. It was truly a day of pleasure and enjoyment.

Some of the speaking on this occasion was remarkable, and

will never be forgotten. Of course you have heard the particulars.*

We saw the Golden Gate, where the waters of the Pacific pass through a narrow passway to the Bay of San Francisco. We stopped at the Navy-Yard, and I saw the most magnificent roses there I ever saw before, notwithstanding my residence in a land of flowers. The resident officers were exceedingly polite, throwing open their gates and inviting all to come in and gather flowers, and truly there were flowers for all, and to spare. Flowers, fruits, and vegetables flourish here in grand style, the dew being sufficient near the coast to keep them moist without rain.

The climate of San Francisco did not please me; there was a horrible gale blowing all the time. It is bad for the lungs, and especially bad for the complexion of the ladies. The most common diseases here are pneumonia, bronchitis, rheumatism, and insanity, the latter being very common.

Another place I must mention (before closing) to which the Association went in a body—namely, the Toland Medical College. It is a good building, well adapted for teaching, and was built by Dr. Toland at his own expense. There is a good corps of professors attached to the Institution, and we were entertained by them in a very handsome style, a fine lunch having been prepared and laid out in the basement of the building. Adjoining this College is the Inebriate Asylum, presided over by Dr. Arthur Hayne, formerly of Charleston, S. C., and a son of R. Y. Hayne. He is an accomplished physician and gentleman.

I should like to extend this letter, as there are many things of interest that I could mention, but for fear of intruding upon your pages and wearying your readers, I stop, at least for the present.

Yours truly,

J. S. WEATHERLY.

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* Yes, and will give them in due season.—ED.

PADUCAH, KY., 1871.

Dear Sir,—I am preparing a report on Resection of the Long Bones, and any assistance you can give me will be appreciated. Those cases performed during our late war are especially desired, as sufficient time has now elapsed to enable us to make practical deductions from that class of cases.

Please give the notes of the cases after the following form:

Very respectfully,

JOSEPH W. THOMPSON.

Date of wound, and at what battle wounded? Date of operation, and with what kind of missile was the wound inflicted? Where is the seat of resection? How many inches of bone were exsected? Has bony union occurred? What is the extent of the shortening (measure accurately) of the limb? Are the functions of the limb impaired? Is it better than no limb? Do abscesses continue to form around the seat of resection? Do you know of any resected limbs that have been cut off as nuisances? Do you know of any deaths resulting from the resection? Give the name and post-office of the case, the condition of the limb at this time. Also, the name of the post-office of the operator.

NOTE.—Readers will please aid Dr. Thompson in his investigations, by sending him reports.—ED.

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PHILADELPHIA, July, 1871.

*Editor of the Louisville and Richmond Medical Journal:*

Dear Sir,—My attention has just been called to an error in your issue for June last. By regulation of the Board of Trustees of the University, no person can obtain the degree of Doctor of Philosophy unless "he be a graduate in Medicine of the University, or of some medical school recognized by it; and in addition, shall have attended at least two full courses of lectures by the Auxiliary Faculty of Medicine, and have passed a satisfactory examination before this Faculty."

Very respectfully yours, JOHN J. REESE, M. D.,
Dean of Aux. Fac. of Med., University of Pennsylvania.

*Dr. Gaillard:*

I send you for publication the following notice. Please insert it in your next issue. Yours truly,

E. B. RICHARDSON.

MEDICAL SOCIETY OF SOUTHWESTERN KENTUCKY,
June, 1871.

Pursuant to agreement, the physicians of the First Congressional District of Kentucky met in the city of Paducah, on May the 25th, for the purpose of organizing a District Medical Society. Dr. R. Saunders was called to the chair, a nominating committee appointed, and the following gentlemen unanimously elected as officers: D. A. Maxwell, President; S. P. Payne, A. J. Watson, and J. W. Becker, Vice-Presidents; E. B. Richardson, Recording Secretary; J. G. Brooks, Corresponding Secretary; John Anderson, Treasurer.

The officers were installed, and the following committees were appointed for the ensuing year: J. Anderson, Ulcers; A. A. Slaughter, History of Medicine; W. D. Senter, Dysentery; S. P. Payne, Dietetic Regulations; W. D. Hunt, Pneumonia; E. B. Richardson, Diseases of the Eye; J. G. Brooks, Syphilography; A. J. Watson, Pulmonary Abscesses; J. W. Thompson, Resection and Conservative Surgery; Thomas Rivers, Uterine Diseases; C. A. Elliott, Diagnosis.

The meeting adjourned to meet in the city of Paducah on the second day of the October Fair, to be held in McCracken county.

E. B. RICHARDSON, Secretary.

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LEBANON, KY., 1871.

*Editor Richmond and Louisville Journal:*

Dear Sir,—Your Journal recommends the physicians throughout the State to form County Medical Societies. I presume that this (Marion) county has about the oldest Society in the State. I entered the office of my venerable preceptor, Dr. S. M. Shuck, twenty-five years ago. This Society was in working order then, and remains so to-day. I think its age is about

thirty-five years. President, W. W. Cleaver; Secretary, W. P. Warren, with over twenty members. Yours truly,

W. W. Cleaver, M. D.

## REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

Art. I.—A Practical Treatise on the Medical and Surgical Uses of Electricity, Including Localized and General Electrization. By George M. Beard, M. D., and A. D. Rockwell, M. D. New York: W. Wood & Co. 1871. pp. 698.

This work is so divided as to have the reader study in turn the following subdivisions of the subject; electro-physics, electro-physiology, electro-therapeutics, electro-diagnosis; with cases, lucid descriptive, etc. It is unquestionably the best and simplest authority on these subjects at present accessible. The descriptive is clear and excellent. The exhibit of cases satisfactory, instructive, and evidently honest, the failures and successes being equally given. The authors are evidently partisans of general electrization as opposed to electrization wholly local. This, however, does not rob their work of its value, for they demonstrate fully the good effects of local electrization, and who has ever written a book without an unconscious, perhaps unavoidable tendency to sustain individual and personal views? When both sides of a question are given, this is all that can be fairly asked. As electrization is becoming daily more and more one of the reliable elements in therapeutics, those who wish in this connection to be "abreast of the times," cannot purchase a work which will be more satisfactory and valuable.

The publishers have sustained their reputation by the manner in which this book is published.

ART. II.—ON THE WASTING DISEASES OF INFANTS AND CHILDREN. By EUSTACE SMITH, M. D., M. R. C. P. L., etc. Second American Edition from Second Revised and Enlarged English Edition. Philadelphia: H. C. Lea. 1871. pp., 266.

As the first edition of this admirable work was reviewed carefully in this journal, it is unnecessary to add much in regard to it. It has been enlarged by the addition of most valuable matter in connection with mucous diarrhœa, and the proper diet for invalid children. Nothing in actual practice causes the physician more annoyance, perplexity, and constant disappointment, than the result of his best efforts to control the diarrhœa of young children, with the unsatisfactory effect of his varied attempts to adopt in each case a proper diet. This work is, in such emergencies, an invaluable friend and guide.

The author, as physician to the largest free Dispensary for children in London, has enjoyed an experience equalled by few, and surpassed by none. The work is handsomely issued.

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## MISCELLANEOUS BOOK NOTICES.

AMERICAN ASSOCIATION FOR THE CURE OF INEBRIATES. H. B. Ashmead, 1104 Sansom street, Philadelphia, Pa., Publisher.

Those who are interested in this subject will find it to their interest to obtain a copy of this pamphlet. It contains a minute account of the organization; Essays on the Influence of Alcohol, the Philosophy of Intemperance, the Disabilities of Inebriates, Experiences at the Washington Home (Boston), Restraint as a Remedy in the Treatment of Inebriates, the Relation of the Church to Inebriates, Inebriate Asylums and Statistics of Insanity, Extracts from Charters of Various Asylums, etc. The essays are instructive, and the pamphlet is a valuable and interesting addition to the literature of the subject of inebriety.

FŒTICIDE. By HUGH L. HODGE, M. D., University of Pennsylvania. Lindsay & Blakiston, Philadelphia, Publishers.

This is one of the best essays published in this connection.

Its veteran and distinguished author has written with all of his conciseness, comprehensiveness and accuracy. The pamphlet is well worthy of being added to the library.

NEW YORK STATE INEBRIATE ASYLUM, Binghamton, N. Y.—Report for the Year 1870.

Those who desire the facts in connection with the experimental treatment of inebriates in asylums, will find very much in this report to interest them. A copy of it may be obtained of the accomplished physician of the Asylum, Dr. D. G. Dodge, Binghamton, N. Y.

CLINICAL REPORT OF THE ROTUNDA LYING-IN HOSPITAL, Dublin, Ireland.

This valuable pamphlet is from the pen of Dr. George Johnston, Master of the Hospital. It is made up of cases of interesting rarity, statistics, treatment, etc. The specialist will find this pamphlet a valuable addition to his authorities.

A CRITICISM ON THE MANAGEMENT OF THE CASE OF DR. ALDEN MARCH, of Albany, N. Y.

This subject has given rise to much bitter and unhappy controversy; to unwelcome vituperation, and to ill feeling. So far, the cause of science has not been benefited, and the reputation and happiness of many have been seriously involved. That the treatment of Dr. March was very unfortunate cannot, it seems, be tenably denied. To treat an overdistended bladder by "an expectant method," giving the patient, who is lapsing into a condition of uræmic poisoning, freely of opium, is certainly not the treatment which commands the support of the Profession. The death of Dr. March was very unfortunate, and while it may have occurred under any treatment, no one can claim correctly that his case was judiciously managed. The past, however, cannot be recalled; the contestants, both now and in the future, had better vie with each other in strewing laurels over an unhappy grave, rather than indulge in gladiatorial feats about the arena, in which the deceased made his last and terrible struggle.

THE FIBRINOUS CRASIS. By R. R. GREGG, M. D., Buffalo, New York.

Although this pamphlet is written by a homœopathist, it is well worthy of attention. He advocates the view, not original but plausible, that hyperinosis (the fibrinous crasis) is due to loss of albumen, and is not an evidence of inflammation. No one, it is supposed, can be so ignorant at the present time as to assume that inflammation and a hyperinotic condition of the blood bear the relation of cause and consequent, though it is to be confessed, with shame, that many of our authorities yet teach that hyperinosis is a coincident, if not a result, of inflammation. Those who desire to read some very fair and creditable arguments in regard to the fibrinous crasis, will not be disappointed in the examination of this little pamphlet.

THERIAKI AND THEIR LAST DOSE. By Dr. S. B. COLLINS, Chicago.

Those who are slaves to opium-eating will be interested in reading this entertaing little volume.

WOMAN'S MEDICAL COLLEGE OF NEW YORK.

The announcement of this College has been received. It is remarkable, that in its last class there was not a single "lady-student" from the South. In Philadelphia there was one. These colleges are well conducted and well officered. They are making a severe struggle for success. Such faithful and honest laborers deserve success. Would that these labors were in a different field. They are noble, but it is feared and believed that they are detrimental to the best, happiest, and dearest interests of woman.

THE MODERN OPERATION FOR CATARACT—A Lecture Delivered before the Harvard Medical School, April, 1871. By HENRY DERBY, M. D., etc. Boston, Mass.

Those who are devoting themselves to the study and practice of ophthalmology, will find this lecture to be one of great value. There is given an analysis of sixty-one operations, with a comparison of the different methods, results, etc.; also lithographic

representations of the most approved instruments. This excellent pamphlet can be obtained from its author.

TENTH ANNUAL REPORT OF THE ALABAMA INSANE HOSPITAL.

This Institution is being managed in the best possible manner. The report manifests this fact in all of the details published. Its accomplished superintendent and physician, Dr. P. Bryce, of Tuscaloosa, has secured for himself the highest confidence and respect for his general and special administration. He has, in this report, presented some very forcible and interesting reasons for the establishment of a "Reformatory for Inebriates" in connection with the Asylum. It is a fact that inebriates are willing to undergo restraint as an aid to reformation, and that their friends are also willing to have restraint instituted, for such a purpose. It may be doubted, however, whether it is judicious to foster this growing conviction in regard to the irresponsibility and uncontrollable actions of the inebriate. There is but a small step to be taken beyond this to reach the position, that the drunkard is an irresponsible creature; irresponsible in his actions not only in regard to himself, but to life and property; a position which, if admitted, is manifestly fraught with danger to every community. Psychologists are even now doing the dangerous work of familiarizing the public with the idea that anger renders one irresponsible for crimes perpetrated during its existence; that legally, as well as poetically, anger is a "brief madness," and that during its existence one is irresponsible for his actions. Nothing can be more dangerous or inexcusable than such teachings. Kindred to this idea, is the new one, comparatively, that the inebriate, like the madman, is unable to control himself, and is, by analogical reasoning, irresponsible. When a jury is educated to associate the confirmed inebriate with the lunatic asylum, with the idea of restraint and irresponsibility, there is but another step to the position, that one, during such a condition, is irresponsible for crime; that drunkenness is a palliation, and not, as it should be, an aggravation of crime.

Dr. Bryce's views, however, are those of an accomplished physician, a sound thinker, and an able reasoner. They are worthy of all attention.

## CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—HOR.

BY THOMAS E. JENKINS, M. D.

*Cundurango.*—Cundurango is the name of a tree growing in the Province of Loja, Ecuador, and said to yield a medicament of great value in the treatment of cancer and constitutional syphilis. A remarkable coincidence in regard to this well-advertised novelty, is the fact that a patent was issued by the office at Washington for a medicine of which cundurango is the leading constituent just about the time the Government was thoroughly advertising the vegetable as a remedy, and while no less a celebrity than the Vice-President of the United States, through the telegraph, etc., was attesting its wonderful virtues and efficacy. Can there be a Cundurango Ring?

*Silver in Subnitrate of Bismuth.*—A specimen in Powers & Weightman's subnitrate of bismuth yielded 37 per cent. of chloride of silver. J. D. Owen, in *Am. Pharm. Journal, July*, 1871.

*Carbolic Salve.*—℞.: Cerati Simplicis, ℥i.; Acidi Carbolici, ʒss. M.—S. A.

*Female Apothecary.*—The "Ostseezeitung" states that recently, before the government examiners, a lady passed the examination as apothecary, and acquitted herself so well that she received the award "excellent." It is the Deaconess Phillipina Mangelsdorff who was thus recognized as the first female apothecary in the Province of Pommerania, Prussia.

*Successful Treatment of Atropia Poisoning.*—A late case of poisoning by the accidental ingestion of two-thirds of a grain of sulphate of atropia was successfully combated by the hypodermic administration of one and one-third grains of morphia.

The alarming narcotic effects of this large dose of morphia, were counteracted by the subcutaneous injection of a solution of caffein in a strong decoction of coffee, and the application of the galvanic battery. Complete recovery took place in less than twenty-four hours.

*Santonine Salts.*—A writer in the "London Practitioner" gives a formula for preparing a "solution of santonine," as follows:

℞,—Santonini, in Pulvere, grs., xii.;
Sodæ Bicarbonatis, grs., xxii.;
Aquæ Distillatæ, ℥iij.

Dissolve the soda salt in the water at or near the boiling point, and add the santonine by small portions at a time, and reduce the liquid, by evaporation, to two fluid ounces.

The santonates of soda and of suboxide of mercury are in commerce in Germany, and have been long used as anthelmintics in in that country.

*Chloral.*—Hydrate of chloral should almost always be preceded by a dose of bicarbonate of soda or of potash, and it should be administered in small doses, in rapid succession, until sleep supervenes. It may be resumed when the patient permanently awakes.

One hundred grains of this hypnotic (equal to eighty grains of chloroform), appears to be as much as may, as a rule, be introduced with safety into the system at one time.

*Sophistications.*—Muriate of cinchonine is put up in sulphate of quinine bottles, and sold quite extensively for the latter salt.

Liebig has lately published a letter in which he disavows any connection with various parties and companies engaged in the manufacture and sale of "Liebig's Extract of Beef," "Liebig's Infants' Food," &c. His name is used without his consent, and against his wishes.

"Extract of Malt" is stated to be a common beer, and is sold at about ten times the price of good beer.

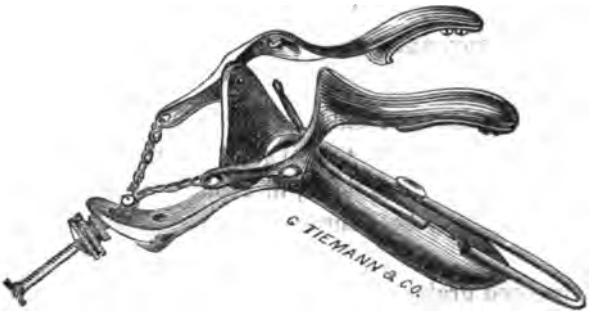
"Elixirs" are of all qualities and prices; the majority of them are almost entirely devoid of medicinal virtues, and consist of sweetened and aromatized weak spirits.

NOTE.—The medicine-made-easy sentiment prevailing in this country has led the profession to adopt and encourage this species of humbugery, and our pharmacopœia is in imminent danger of being swamped in this quagmire which physicians strangely guard and foster. T. E. J.

## MISCELLANEOUS.

"Non omnes eadem mirantur amantque."

### THE SPECULUM OF DR. J. C. NOTT, New York.




The instrument sketched above is a new speculum, which is used with the patient on the back, and though it may be used with the patient on a common bed (like all specula), it is much more convenient with the patient on a table before a good light. This instrument affords a very good view of the *os uteri*; is self-retaining, and enables the operator to examine the cervix without an assistant; introduce and remove sponge-tents or other dilating apparatus, and facilitates very much the removal of polypi or small fibroids by the wide expansion which it gives

to the vagina. It is, moreover, so constructed that all the branches may be lengthened or shortened to suit the depth and size of the vagina. It may also be converted into a Sims's speculum by detaching the feet and attaching a movable handle which accompanies it. The speculum of Dr. Sims is now almost universally regarded as the best of all instruments for vesico-vaginal and all other operations on the vagina. In fact, the speculum of Dr. Sims is the most perfect of all instruments of this class where you can command a competent assistant; but as this want cannot usually be met in private practice, the above instrument is designed, as far as possible, to supply its place.—*Exchange.*

*Novel Mode of Controlling Hæmorrhage.*—Dr. J. H. H. Burge ("New York Medical Journal") contributes the history of a case of placenta prævia attended with profuse hæmorrhage. He found a small margin of the placenta presenting. The liquor amnii had completely drained away, so that the outline of the child could be made out through the abdominal walls. The examination excited some pain, and caused considerable hæmorrhage. Observing that during the pain the pressure of the child's head upon the placenta controlled the flow, he, in the intermission, grasped the uterine tumor and pressed steadily in the direction of the os. This was continued with perfect success for two and a half hours, when a living child was born, and the placenta followed without loss of time. During all this time, if the pressure was relaxed while the uterus was inactive, hæmorrhage was sure to follow.

*New Method of Reducing Dislocations of the Shoulder.*—Dr. Sam. Logan, New Orleans, thus describes his method. The patient is placed on the back, while the surgeon, having removed his boots, seats himself so that his legs shall be nearly at right angles to the patient's body, but pointing rather upwards. He places the heel of one foot in the armpit, against the ribs, so as to press a little crosswise; the base of the great toe of the other foot is placed against the acromion process, and the surgeon

pushes with moderate force, while traction is made upon the arm.—*Transactions Am. Med. Assoc.*

*Subcutaneous Injection of Bubo.*—Dr. Werthheim, attached to the syphilitic and skin department of the Rudolph Hospital, Vienna, states that he has given up all attempts at dispersing buboes by causing their absorption, and now treats them by subcutaneous injection. Solutions of morphia, camphor, sulphate of copper, etc., may be used as circumstances require, but muriate of ammonia (gr. iv., aquæ ℥ij.) is that which is usually preferable. The ripe abscess is punctured by means of a thick needle, or the tube of a strong Pravaz syringe. After most of the pus has been gently pressed out, the injection of eight or ten drops of the solution is practised, the patient being taught himself to empty every three or four hours the fluid that may have collected. The injection is at first repeated daily, and afterwards at longer intervals. Although not essential, it is better for the patient to keep in bed. The advantages of this method are, that the pain of the abscess almost immediately ceases, and the other inflammatory symptoms steadily diminish; the thickened pus is gradually transformed into a thinner fluid; gradually decreases in quantity; no cicatrix remains; formation of pus is confined to the gland, and surrounding inflammation gradually diminishes.—*Boston Medical and Surgical Journal.*

*Excision of the Mamma.*—In an article by Joseph Bell, in the "Edinburgh Medical Journal" of February, on Excision of the Mamma, he gives the following résumé of his views:

1. We are not bound to an elliptical or oval incision; but in many cases a crucial, radiating, or T-shaped one is more convenient, and renders dissection of the mamma more complete.

2. There are certain cases where the progress of the cancer is slow, the skin not infiltrated, and the constitution not affected, in which we are warranted in operating on axillary glands.

3. That for such operations to have any chance for success, we must see that the breast is removed *entire;* that the axilla

is cleared of its fat as well as glands; and that the chain of diseased lymphatics is also removed.—*Med. Rec.*

Many cases of successful replantation of teeth are reported. They are removed, scraped, plugged, and replaced. Cuspids, bicuspids, incisors, and molars, have all been successfully replanted.———Women are now allowed to attend the clinics at the Pennsylvania Hospital. The attendance has become reduced more than one-half, and the audience consists of homœopaths, eclectics, etc., in all respects conglomerate.—*Buf. Jour.* The calabar bean is now given with marked success in obstinate constipation due to atony of the muscular coat of the bowel.——— Dr. F. B. Crane, of Detroit, an old asthmatic, regards the climate of Colorado as an absolute cure for this disease.——— There are 13,000 dentists in the United States and nine dental colleges. In Europe there are no dental colleges.—*Exchange.* ———*Homely but Useful Information.*—Cement for glass syringes: Resin, two parts, gutta-percha, one part—melt over a slow fire; apply hot, and trim with a hot knife.—*Scientific American.*———Liquid glue: Fill a glass jar with broken-up glue of the best quality, then fill the vessel with acetic acid. Keep the jar in hot water until the glue melts, and the glue will always remain liquid.———The University of Pennsylvania is constructing a large and handsome hospital for its own use in clinical teaching.———The Harvard Medical College has endeavored to institute a great and excellent reformation; the course of study is extended to three years; the class is so divided that the students of the first, second, and third years' attendance have assigned to them a special curriculum each, and attend the lectures as three separate classes. The weak point in the reformation is evident in this sentence; "students who begin their professional studies elsewhere may be admitted to the school, and become candidates for a degree without joining the regular classes." This really nullifies the reform, and places this school, practically, in the same category with other medical colleges.

# MEDICAL NEWS.

'Nulla dies sine linea."

The "American Journal of Obstetrics" is now published by G. W. Baldwin & Co., 21 Park Row, New York. Price $5; to those subscribing through this office, $4. This Journal is well worthy of support.———Cholera has appeared at St. Petersburg. ———Liebermeister, of Zurich, succeeds Niemeyer.———Longet died in May, at Bordeaux, aged 68 years.———Oppolzer died at Vienna, April 16th, aged 63 years.———The first number of the "Medical World" has been received. It is edited by R. A. Vance, M. D., and published by W. A. Baldwin & Co., of New York. The first number is quite creditable.———The Pope is suffering from "ascending paralysis" and is seriously prostrated.———Schweigger, of Zurich, a pupil of Græfe, succeeds his great master.———In Great Britain $25,000 have been subscribed to the memorial fund in behalf of Sir J. Y. Simpson.———Bamberger, of Würtzberg, succeeds Oppolzer. ———St. Bartholomew's Hospital has sustained an irreparable loss in the resignation of Mr. Paget.———Liebreich has been recently elected ophthalmologist at St. Thomas' Hospital, London.———Prof. J. C. Dalton, of New York, has just concluded an elaborate series of experiments in regard to sugar formation in the liver; his results are as follows: Sugar exists in the liver at the earliest period at which the liver can be removed for examination; the quantity usually existing is not less than 2½ parts in 1,000; it does not "belong" to the arterial blood, but is a normal ingredient of the hepatic tissue.———The medical profession has just sustained a great loss in the death of Dr. George Blackman, of Cincinnati, Ohio; he was a learned man, an accomplished surgeon, and an ornament of the ranks in which he served with great distinction. He died, it is said, of "dropsy;" the cause of this symptom, that is, his real disease, is not given.———Drs. James D. Hunter and W .T. Lusk, suc-

ceed Dr. Edward Dunster in the editorial management of the "New York Medical Journal." They are accomplished physicians, but will find it difficult to sustain the degree of excellence manifested during the administration of Dr. Dunster.——— From the overwhelming testimony being received from distinguished physicians in all parts of the South, it is evident, if the "American Medical Association" does not, as soon as it meets, free itself from the disgraceful incubus of its present President, that the next meeting will be its last; at once its death and burial. The Association will then be the latest distinguished victim of capital* punishment.

## EDITORIAL.

**"Nullius addictus jurare in verba magistri."—Hor.**

### BREVITIES.

Dr. R. M. Townsend, Assistant Demonstrator in the "Jefferson Medical College," has prepared a "Chart of the Sympathetic Nerve," which has been published by T. Hamilton, 106 South Tenth street, Philadelphia. A copy of this chart has been received. It is colored in three tints, and the tinted diagrams represent respectively the sympathetic, motor, and sensory nerves; the branches of communication and distribution being indicated by arrows. While this chart is a good one, it does not convey to the student any conception of the great contributions made to this portion of medical literature, by Nothnagel, Pfluger, Séqard, Lovin, and others. Nothing can be more detrimental to the student than the adoption of the rule so long taught, and so frequently yet taught, that the sympathetic and cerebro-spinal systems of nerves are anatomically (and so physiologically) individual entities, the points of apposition or union being very limited in number and extent; whereas if any fact, any great

* Relating to the head.

fact is now well understood, it is that there is scarcely a vaso-motor nerve of the entire body which is not largely made up of filaments from the cerebro-spinal system of nerves. Nothing is more important to the student, whether he be a graduate or a practitioner, than to remember that instead of the very limited connections once believed to exist between the sympathetic and cerebro-spinal systems, there is really but little separation between them in all of their intricate ramifications. When irritation of the trigeminus or sciatic causes contraction of the vessels of the piamater (Nothnagel), when cold applied to the chest produces contraction of the pulmonary capillaries (Lovin), it is impossible to regard the organic and inorganic nervous systems so comparatively disassociated, as to be profitably studied by the devices of tints and arrows. Very many other charts convey the same erroneous impression, that would perhaps be conveyed by that of Dr. Townsend, so that what has been written in this connection is not specially applicable to the chart mentioned. Indeed, this chart is very cleverly executed, and the author and designer is known to be an accomplished anatomist. It is important, however, to call the attention of the reader to the danger of now regarding the two nervous systems as comparatively disassociated entities. ——— The "Philadelphia Medical Surgical Reporter" is seriously exercised over the review of the "Presidency of the American Medical Association" published in this Journal. The conclusions for its censure are based upon these two premises. 1st. That the review is the result of personal "animosity," and 2d. That the author had his review published in the daily papers of Louisville. As there is not a vestige of accuracy in the premises, the conclusion based upon them is logically as "lame and impotent" as that charged upon Iago, when he unwisely thought that a part of his office was "to suckle fools and chronicle small beer." Indeed, one cannot feel "animosity" in such a relation, for animosity implies respect. Animosity, too, would induce the heaviest possible blow, and not simply a passing, yet deserved thrust. As a distinguished polemical orator once said, when charged with a

desire to annihilate one forming, in part, the subject of his address, so the writer may say in this connection, when he is charged with manifesting the violence of animosity: "Sir I would be actually afraid to strike him with my fullest force, for fear of dislocating my shoulder; there is not enough before me to arrest the blow."———The American Newspaper Directory recently published, gives interesting information in regard to all American publications, and among these are included American Medical Journals. The circulation of many medical joarnals is given as follows: Virginia Clinical Record "claims about 600"; Baltimore Medical Journal and Bulletin "about 800"; Nashville Journal of Medicine and Surgery "claims 400"; Georgia Medical Companion "about 400"; American Practitioner, Louisville, Ky., "about 800"; Richmond and Louisville Medical Journal "circulation 1,200"; Detroit Review of Medicine "about 650"; St. Louis Medical and Surgical Journal "claims 1,050"; St. Louis Medical Archives "about 1,200"; Buffalo Medical and Surgical Journal "about 600"; New York Druggists' Journal "about 720"; Boston Medical Journal "claims 2,000"; New York Medical Journal "claims 1,400"; Chicago Medical Journal "claims 1,550"; Philadelphia Reporter "claims 2,100"; Cincinnati Lancet "about 2,000"; Cincinnati Repertory "1,500," etc. It will be perceived from these extracts from this Directory, that the Richmond and Louisville Medical Journal has, by more than one third, a larger circulation than any journal in the South, and a circulation equaling several of the oldest journals of the North. This is said in no spirit of egotism, but of gratitude rather to those who have done so much and are still doing so very much to sustain this work. A single subscription sent forward by each subscriber will make the circulation of this Journal such, as to enable the editor to largely increase the value of the work to every reader. Every one can do this. Who will refuse to do so?

# PERMANENT NOTICES.

1. Contributors are requested to limit their articles, if practicable, to twelve or twenty pages of letter paper; to divide them into paragraphs as they desire these to appear, and to indicate each paragraph, as follows, ¶. They are also requested to write all proper names with special legibility, to number their pages distinctly, and to punctuate their articles properly.

2. All rejected manuscript will be returned, if the necessary postage stamps are sent. The editor can not correspond with any one in regard to rejected manuscript.

3. Accepted articles, as a rule, are published early, but after articles previously accepted have been published. Where it is advantageous to do so, this rule is waived; not otherwise.

4. The proceedings of medical societies are only valuable to the general reader so long as they appertain to topics of general interest. Discussions in regard to questions of local importance, reports of business details, personalities, etc., will be rejected. Debates in extenso will not be published, unless these be of unusual and general interest. Abstracts of proceedings are more valuable than proceedings in detail. Officers of societies are respectfully requested to send their Transactions for publication early and promptly.

5. Where any one, for any reason, returns a Journal, it is particularly requested that his name be written upon the Journal or the wrapper; otherwise no action can be taken in regard to it. Where a subscriber changes his place of residence, early information of the fact is requested.

6. The Journal can not, without loss, be sent to any one for less than the price of subscription. Commutations are neither allowed nor requested.

7. Publishers sending books for review, are requested always to state the price of each. The readers of reviews especially desire this information.

8. European packages intended for this Journal should be sent to Trübner & Co., 60 Paternoster Row, London.

9. Receipts for all money received are sent in the Journal for the subsequent month.

10. Those who have not the leisure for reporting interesting facts, occurring in their practice, by formal articles, are requested to do so by letter; such letters are always acceptable.

11. All business connected with the Journal (excepting only that appertaining to the publication and printing of it,) is transacted at the office of the editor, 163 Second Street, where full files or specimens of the Journal can always be obtained.

12. Whenever the subscribers to this Journal, desiring to enlist their friends in support of it, will write to them for this purpose, the editor will take pleasure in gratuitously sending specimen copies to any addresses that may be furnished to him.

13. Advertisements in this Journal are published at the rate of $50.00 to $80.00 (according to the amount of matter) for each page, annually: less space and less time being charged for proportionally. To any one sending "the copy," with the required order, from any responsible individual or business House, the editor will pay a large commission, in advance of any receipts from the advertiser.

14. All communications or packages should be addressed to

E. S. GAILLARD, M. D.,
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THE RICHMOND AND LOUISVILLE

# MEDICAL JOURNAL.

VOL. XII. SEPTEMBER, 1871. No. 3.

## ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—ANATOMICAL AND PHYSIOLOGICAL REFLECTIONS ON SOME PARTS OF THE EYE. By R. F. MICHEL, M. D., of Montgomery, Ala., Ex-President of the Medical Association of the State of Alabama, and Vice-President of the American Medical Association. Published also in the Transactions of the American Medical Association of the State of Alabama for the year 1871. Read before the Association.

Gentlemen,—It is now nearly a quarter of a century since I published in the "American Journal of the Medical Sciences" certain Anatomical and Physiological Reflections on some important parts of the human eye; and I design upon the present occasion to reproduce for your consideration these investigations in a more particular and, I think, elaborate form.

Especially do I do this, because I recognize the fact that the opinions I then expressed are beginning to receive the sanction of the Profession in Europe as well as in this country.

The recent progress of medical science has of late years been so rapid that it may now be said to occupy a position incomparably superior to that enjoyed by most of the other professions. The reciprocal bearing of its various branches one with another, which is now being daily exhibited, imposes the

belief that it must shortly attain the character of a completed and well-established science.

While this perfected condition of the medical profession will hereafter pre-suppose an accurate knowledge of its various departments, it can never, however, deter the investigator from prosecuting his researches in any determinate direction, if he fail not to forget the mutual relations which his results should ultimately present with the connecting sciences. This, indeed, is the goal that we should endeavor to attain, and that must be regarded as the criterion of all future inquiries.

While among the litigated points of anatomy and physiology there are many questions rendered particularly intricate from the numerous bearings which they present, there are others which require but the scrutiny of an anatomical eye to lead us almost naturally to the physiological inductions which appear to follow as the sequel. This is, perhaps, the nature of the examination into which we are about to enter.

While studying absorption, and believing from the concurrent testimony of several physiologists and the plausibility of their researches, that the venous system plays a prominent part in the discharge of this important function, the eye presented itself to me, as said to be an organ totally deprived of lymphatics, which, consequently, seemed to be an argument verifying the assertion. The question arose whether the eye really possessed any peculiar vascular arrangement which distinguished it in this respect from any other organ, as it was deprived of lymphatics for the accomplishment of absorption. A careful anatomical examination was instituted, by which I purposed to determine the relations which exist between the constituent parts of that organ and their peculiarities of structure.

In undertaking this subject and making reference to the works which were inservient to my purpose, I found that I had engaged in a vast field already explored by those whose names are destined long to reign with oracular authority over anatomical questions.

Indeed, the names of Sœmmering, Zinn, Arnold, and others, appeared to preclude the possibility of my determining anything positive with regard to this problem. But as from every subject truth may be said to radiate like the beams of light in various directions, the hope has been encouraged that it is given to every one to view it in some one of those numerous phases, which may possibly have escaped the scrutiny of the imposing authorities whose names have been mentioned as above.

Proceeding then, without further preliminaries, to the discussion of a subject no less intricate than interesting, we will, for the facilities of description and the more orderly exposition of the facts which support our views, comprise what we have to say under two sections: Examining under the first head such parts of the eye, the complexity of whose structure fails not to attract our serious attention; and under the second, making such physiological inference from the structure of these respective membranes as may elucidate the functions they discharge in so delicate an organ as the eye.

As our remarks will therefore particularly bear upon the function of absorption and the nutritive acts as they transpire in the eye, attention will be almost solely directed to the *choroid coat* and its appendages, the *iris* and *ciliary processes*, while the hyaloid membrane and body will also engage our time so far as they may be connected with the vascular arrangement of the organ.

After my first examination of an eye, prior to my attention being especially engrossed by this subject, I found that my impressions concerning the choroid coat were by far the most striking. I was no less impressed with that peculiar deposit (than which there is nothing more singular in the whole economy) investing the entire membrane, than that there should be so large a reticulum of blood vessels in so small a space. Indeed, the vascularity of this coat is such that the learned Professor Cruveilhier justly remarks that the words *choroid* and *vascular* are synonymous, and it may not be irrelevant perhaps to allude to the etymology which sanctions such an opinion.

The term *chorion* applied to one of the membranes enveloping the fœtus is the Greek word χόριον, which is derived from χώρος—domicilium—a house being indeed an abode for the fœtus, a protective envelope of indispensable necessity to its nutritive act.

But this membrane being formed of a network of vessels, its extreme vascularity became the characteristic feature which served to discriminate it from every other membrane in the body.

When, indeed, Hyrophilus described the choroid coat, its vascularity likened it at once to the chorion, and though we will not at present anticipate the parallel which we are about to establish between these two membranes, let us only state that the word is compounded of χόριον—chorion and Εἶδος—resemblance.

Of the general direction and relation of this vascular layer, it is needless to speak, as this would be but reproducing what every elementary work on anatomy contains, but of its anterior termination and structure, concerning which there is such diversity of opinion, we will furnish some account.

Since the days of the celebrated injector Ruysch, the choroid has been regarded as composed of three distinct layers, which are readily exhibited when recourse is had to the proper modes of preparation. The outer layer, which is manifest to the unassisted eye, is formed of a multitude of blood vessels held together by cellular or filamentous tissue (these cells are pressed together, colorless, having short branches which penetrate a striated tissue partially nucleated), and when examined with the lens, present a tortuous direction, running into centres from whence radiate a number of convoluted capillaries. From the multiplied centres, the rendezvous of these arborescent ramifications, the vessels (which are altogether composed of veins) have been called veno-vorticosa, and contrast very strikingly with those of the layer beneath, which is made beautifully conspicuous when both are injected.

The lamina immediately beneath is arterial, its vessels cours-

ing lengthways towards the anterior part of the eye. This is the layer which was first so beautifully injected by Ruysch, and and has ever since borne his name—tunica Ruyschiana.

This part, when well injected, gives to the choroid coat the appearance of a sheet of gold; very excellent representations of this are given in Zinn (J. G. Zinn, Descriptio Anatomica Oculi Humani, Tab. iv., Fig. 1 and 2) and Sœmmering (Sœmmering Oculi Humani Explicatio, Tabulæ quinto, Figura Septima).

The elastic membrane of the choroid is thin, almost transparent, perfectly hyaline; it may be termed a structureless membrane; studded here and there by nuclei which give it a beautiful appearance; this delicate membrane lines the inner side of the tunica Ruyschiana.

The next lamina which forms the inner part of the coat in contact with retina, is not readily exhibited in the human eye, though in the sheep it is always easily demonstrated. This is the membrana pigmenti. After maceration a separation of this portion is most easily effected by commencing at the *tapetum lucidum*, where the layer possesses the greatest thickness; conveyed beneath the microscope, it presents the beautiful appearance of a hexagonal tessellated pavement, each hexagon being a cell in which the granules of pigment are secreted, that portion of its extent forming the tapetum being void of pigment globules, though the cells exist.

Now, after this cursory view of the several constituent parts of the choroid, let us examine the mode of their termination at the anterior part of the eye. Indeed, this is the question which it behooves us to examine, and its careful consideration will form the principal object of the present remarks.

The generally received opinion is, that there is a mutual reception of the ciliary processes, iris and ciliary ligament, and in such a manner, we are told, as to allow of a ready separation of the iris from the seat of the choroid, upon a knowledge of which assertion rests the operation for artificial pupil.

But the exact mode of termination of these several structures (nay, even their exact nature) is by no means settled.

A signal illustration of the diversity of opinions on this subject may be found by perusing a work published by a distinguished physiologist of Germany (Rudolph Wagner), who, in speaking of the ciliary processes, calls them *muscular*, an opinion now professed by few, and which is certainly in formal contradiction with the result of my observations, as far as they have extended among several classes of animals—the sheep, ox, dog, and cat, and in the human species.

Home and Wallace (from their observations on the inferior animals) believe the ciliary processes to be muscular, and to aid in adjusting the focal distance of the lens to the capsule of which they are indirectly connected. [Structure of the Eye by W. C. Wallace.]

Caspar Wistar says "the intricate structure and function of the ciliary processes *are unknown*," and also remarks "that many think them *erectile*, altering the position of the lens by their expansion or contraction." He says in another place: "Their outer extremities seem to adhere anteriorly to the iris and posteriorly to the retina and to the capsule of the vitreous humor." Dr. Jurin (referred to in John and Charles Bell's Anatomy and Physiology, p. 226, vol. 2) says "*they are muscular*," and goes to work to demonstrate how they move the lens. Leidy describes the ciliary processes as composed of "all the elements of the choroid coat;" he describes the artery in them as convoluted (this, I think, must have been done by a forced injection), while Rosow, quoted as authority on this subject by Stellwag, says "The structure of the ciliary processes is very analogous to that of the choroid. It may be divided into the same layers, with the exception of the chorio-capillaries (membrana Ruyschiana, the arterial coat of the choroid), which ends at the ora serrata." Again, Cl. Bernard and Ch. Huette, when describing the anatomy of the choroid coat on page 142, says "Les procés ciliaires plis constitués par le feuillet interne de la choroide, flottent derriere l'iris et entourent la circonférence du cristallin avec lequel ils n'ont aucure adhérence intime."

Here we are told distinctly that the ciliary processes are made up entirely of the inner layer of the choroid (the membrana pigmenti); that they have no vessels in them, for on page 141 the choroid coat is thus described. "La choroide tapisse la face interne de la sclérotique á laquelle elle adhère faiblement. Cette membrane est composée de deux feuillets déstincts l'une interne, entièrment constitue par du pigment, l'autre externe et essentiellement vasculeux." Handy, in his Anatomy, page 136, says the function of the ciliary processes "*is to secrete or furnish the black pigment.*"

Whatever be the mode of union of the *iris* and *choroid*, one fact may be easily established, which is, that the adhesions between the two are far more intimate than is generally believed.

To convince oneself of this fact, we need but observe in dissecting an eye that the *choroid* and *iris* continue still to protect the humors after the removal of the sclerotica and cornea; there is only a slight adhesion of the iris and choroid with the sclerotica. This connection appears to me to be of a muscular character, particularly in the eye of the bird, and in the sheep, where the anterior layer of the iris, which is clearly muscular, seems to give off a multitude of tendinous slips, attached directly to the choroid under the form of a circular white line, improperly called "*annulus gangliformis, seu ganglion annulare*" by Sœmmering. [*Sœmmering, Icones Oculi Humani Explicatio Tabulæ quintæ, Figura Septima.*] This is no ganglion, but a muscular tissue, not deserving the appellation which it often bears of ciliary ligament; it unites the muscular or anterior layer of the iris with the choroid, just as the posterior layer, which I consider as altogether vascular, is directly continuous with that tunic. The pulpy appearance, which the ciliary ligament may sometimes assume, is apparently due to the rupture of its slight attachment to the sclerotica, for this circumstance leaves a somewhat similar appearance upon the corresponding part of the sclerotica.

Such then is the nature of the so-called ciliary ligament, a bond of union between the muscular or anterior layer of the iris

and the choroid, adhering *slightly* to the sclerotica, but *firmly* to the choroid from which it is torn, but does not naturally separate in operating for artificial pupil. But the posterior layer of the iris is a direct continuation of the choroid, and therefore essentially vascular; the blood vessels of the latter running forward and downward, passing over and concealing the interior surface of the ciliary muscle, for which reason this structure is much less visible on the inner than the outer surface. This direct continuity of the framework of the iris with the choroid explains the constant integrity of the two membranes after removal of the sclerotica, as they are literally one and the same. This direct continuation of the blood vessels into the iris is particularly visible in injecting the eye of a fœtus whose pupillary membrane still exists, as may be seen in the plates accompanying Jules Cloquet's monograph on this subject. [Memoire sur la membrane Pupillaire, et sur la formation du petit circle Artenil de l'iris, par Jules Cloquet]. However, I may here observe, and would wish particular attention to the remark, that all the blood vessels do not pass into the iris. Of this I have had repeated opportunity of satisfying myself by injecting the arteries of the choroid tunic.

The ciliary processes, the nature of whose structure has been so variously interpreted, are positively vascular, and present so singular an arrangement of its vessels that my surprise is great in observing the uncertainty of most authors on this subject. It is true, that their nature and the office they probably fulfil, were anticipated by ancient writers, but of this we have nothing but the most hypothetical accounts.

The first experiments which were performed on this subject were by Ribes (Memoire de la Societe Medical d'Emulation, vol. viii.,) in a series of essays published in 1814 and 1816; and here I must acknowledge great assistance from the writings of this accurate and laborious investigator, many of whose researches I am proud to have been able to verify, as I am now more than convinced they carry with them the stamp of truth.

Some of the many views entertained with reference to the

function of the ciliary processes were, 1st. That they were destined to move the iris, or to fix the crystaline lens, over which they exerted that influence which allowed the eye to adapt itself to various distances. It was believed again that they secreted the black pigment which invests the choroid and posterior face of the iris.

It is needless to confute these assertions, as the muscularity of the iris, the membrana pigmenti, and the separation of the ciliary processes from the crystaline lens, are overwhelming arguments to the contrary. Moreover, as observed above, these remarkable structures are altogether vascular, the blood vessels of the choroid coat extending directly into them in the most visible manner, and presenting one of the most beautiful appearances that can be exhibited from injections of any other part of the body.

When, indeed, a ciliary process divested of that inspissated pigment in which it is disguised, and placed on a lamina of glass, is conveyed beneath the field of the microscope, we may distinctly discover the presence of a hollow canal, which, when it reaches the free extremity of the ciliary processes, affects a recurrent direction coursing backwards parallel to the first, so as to form a perfect loop. Eccentric to this loop there is a fringed arrangement of cellular tissue which, indeed, may be distinctly seen with the naked eye.

Now, after a successful injection of colored ichthyocalla through the common or internal carotid, it will be found that the canal in the ciliary process is an artery derived from the arterial layer of the choroid coat. Again, if we inject by the jugular vein (which is much less apt to succeed, owing to the fragility of the veins in the choroid), the injection passes into fringes of the ciliary processes. The vascularity of these appendages to the choroid is evident.

Before we proceed to the inferences deduced from this fact, let me further remark, that on no occasion have I found that the substances used in the injection passed into the hyaloid membrane of the vitreous body. I have never, consequently,

seen the hyaloid artery described by Cloquet and others, as passing through this humor to the posterior part of the lens, though the arteria centralis retina has been easily and fully injected. In these respects do I fully concur with Ribes, who was no more successful in injecting the hyaloid membrane.

Besides these ciliary processes described as dependencies of the choroid coat, there are a distinct series of similar structures connected, as I believe them to be, with the retina, though their presence has been denied by many authors, they are described by others under the name of *ciliary processes of the vitreous body.* They are by no means the depressions of the *zonula zinni* which give that fluted appearance to the canal of Petit, which has led anatomists to term this part of the eye the *canal godronnee.* With a good lens in a favorable light, the fingers of these ciliary processes may be distinctly seen, and they are also susceptible of being injected, though I am not prepared to determine whether the injection passes into them through the central artery of the retina, or from any immediate connection which may exist between them and the ciliary processes of the choroid coat. Indeed, there is a mutual reception between the processes of the choroid coat and those of the vitreous body. This is now a well-known fact. Even Horner, in his second volume, page 415, says "the ciliary processes impress the neighboring portion of the tunica hyaloidea with their shape, and leave upon it the black pigment with which they themselves are covered." It is evidently from this juxtaposition that the latter becomes also invested with the pigment, and a communication between these two sets of processes seems very probable.

If I have supposed the processes of the vitreous body to be connected with the retina, it is from their attachment to the zonula zinni, which I regard as a continuation of the arterial or internal layer of the retina. Many of my dissections justify this belief, and some microscopists have followed the nervous pulpy filaments of the retina along this part to the peripheral portion of the crystaline lens, notwithstanding what Stellwag says on page 128. "The retina is bounded posteriorly by the

optic nerve entrance; anteriorly by the ora serrata, where it is adherent to the retina." I am inclined to suppose that it is through the zonula zinni that the capsule of the crystaline lens receives blood vessels, and that these are derived from the retina, as there has often been an appearance of vascularity about the lens without any traces of it in the vitreous body. Stellwag says, on page 109, line the ninth, "nutrition is carried on through vessels of the retina and uvea."

I am sorry that while in accordance with Ribes, as regards the non-vascularity of the hyaloid membrane and vitreous body, I find that my observations must be placed in opposition to those of Cloquet and Muller. The latter particularly describes the hyaloid artery as passing through the vitreous body, furnishing to its membranes, reaching the posterior capsule of the lens, upon which it is spent. He further mentions a fœtal structure, discovered by himself, under the name of *capsula pupillary* membrane, which also receives its blood vessels from this artery.

It may be that this central artery of the vitreous body exists in the fœtus. Stellwag believes it cannot be found after fœtal life. H. Muller says, that "in the calf and horse its string-like tendinous remains are observed after fœtal life." Meissner has noticed the remains of this structure in the human subject with the ophthalmoscope. Toussaint, Liebreich, and Sämisch, have observed its remains as a tendinous band stretching from the papilla to the posterior wall of the crystaline lens, and then expanding to a flat opacity. Zehener says that he has observed this vessel filled with blood. Henle believes all of these vessels are remains of fœtal life.

Notwithstanding these authorities, I must continue even now, as I did formerly, in my belief; that the humors of the eye are altogether transparent, being deprived of blood vessels which otherwise would intercept the rays of light, or at least materially interfere with vision, especially as I am countenanced in that opinion by so high an authority as Carl Stellwag, who says, when speaking of this humor (corpus vitreum), "It is *perfectly structureless, without vessels or nerves.*"

Regarding then the humors of the eye as completely isolated from the rest of that organ, being enveloped by their proper membranes, which, preserving the character of true serous membranes, are remarkable for their extreme tenuity and non-vascularity, the question arises, *in what manner is secretion, nutrition, and absorption effected.*

Before replying to this question, let us observe that it is not very long ago since the function of absorption (supposed to be the sole prerogative of the lymphatic system) was disputed for by another order of vessels, whose important office was made known to us by the valued experiments of Magendi.

This distinguished physiologist proved by a series of experiments which we cannot here detail, that the veins positively absorb. Again, he was conclusive in the further result, that during this process, the veins manifested a peculiar predilection for liquids, which were taken up with the greatest rapidity.

Now, taking the anatomical condition of the eye as a basis of reply to the above question, and pointing out its alliance to the physiological fact just mentioned, we will at once discover a singular parallel between the office of the choroid coat and that of the chorion enveloping the fœtus. Indeed, like this latter, the choroid is alone inservient to all the nutritive and secretory processes transpiring in the parts which it envelops, and this might almost be inferred from its extreme vascularity and the peculiar distribution of its vessels in those several appendages termed ciliary precesses. These remarkable structures are organs of secretion. This will be readily understood from what has been said of the central arterial loop and the venous fringes, which, together, form a ciliary process; for what would be the object of this extraordinary arrangement were it not to realize some such important office in the vital operation of this perfect organ.

We can certainly imagine that the blood passing through these processes is subjected to an operation allowing the secretion of that aqueous fluid, which, by penetrating into the cell of the hyaloid membrane, will constitute the vitreous humor.

Moreover, from the evident connection of the processes of the vitreous body with, and their penetration into the capsule of the lens (a fact verified by Ribes), we may readily admit a similar operation as going on in their place, which would explain the possibility of capsular cataract, while the lens itself is perfectly transparent. Stellwag says, on page 495, line 24th, "the ciliary processes seem to have a great deal to do with the nutrition of the lens."

Now, after the secretion of these humors (perhaps even the aqueous also), the fringed extremities of the processes being venous, will carry on absorption of the stagnant or vitiated products as follows: The cellulo-vascular fringes of the processes of the vitreous body will pump up the vitreous humor, while from the connection of these processes with those of the choroid, the former will receive in their turn, the nutritive elements for the restorative process of secretion. The processes of the choroid, from their pendant condition in the posterior chamber, are admirably adapted for the absorption of the aqueous humor also.

If, after these anatomical details, our conclusions do not appear to be fully justified, there appears to be some pathological facts which will lend us further support in the confirmation of our belief.

As Ribes observes in the excellent memoire alluded to, "Scarpa was in the habit of operating on cataractous eyes by passing the lens into the anterior chamber, believing that it would be there more easily absorbed; but it will be seen that this opinion, which was the result of a pre-conceived notion, was very soon abandoned. Heister, in his "Institutions de Chirurgie," particularly refers to the necessity of securing the lens in the posterior chamber, as it will there be more readily absorbed, and we know at present that the appearance of the lens in the anterior chamber is always an embarrassing condition, as it requires a length of time for its disappearance. The serious inconvenience which ensues, is perhaps owing to the fact that the aqueous humor must first wash away the lens by degrees, and then

pass into the posterior chamber to be absorbed. Such, indeed, was the conviction that absorption was more readily induced in the posterior chamber, that Heister and others were in the habit of placing the patient on the border of a bed, with his head so depressed, as by frictions over the eye, and blows on the back of the head, the lens might be made to pass back again into the posterior chamber. In cases of hypopion, the same method was made use of, and we would finally remark that the mass of black pigment which invests the eye is thickest precisely in that spot where these wonderfully constructed processes exist.

Stellwag, on page 553, line 3d, says: "It is not advisable to push the fragments of cataract into the anterior chamber, as they collect at the bottom of the chamber and irritate the iris. Their sinking in the vitreous is not attended with any peculiar danger, as they are *there readily absorbed*, and only a small portion of them reach there, for on account of their softness they are usually stripped off and remain in the posterior chamber." In another place he says, "leave nothing in the anterior chamber, not even flocculi," after the operation for the extraction of cataract. This, to my mind, establishes the fact that so high an authority as Stellwag believes absorption takes place better and more rapidly in the posterior than the anterior chamber. Again, when these veins were first made known to the medical public, Dr. Addinell Hewson (one of the surgeons at that time of Wills' Hospital, and lecturer in surgery in the Philadelphia Association for Medical Instruction, as well as editor of William Mackenzie's valuable work on Diseases of the Eye), thus speaks of my researches, page 772, line 42d. "Dr. R. F. Michel, of Charleston, S. C., has reasoned in a very ingenious way on the influence probably exerted by the ciliary processes in effecting the rapid absorption which we see taking place in the chamber of the aqueous humor. From contemplating the great vascularity, both arterial and venous, of this structure, and its total want of lymphatics, he has inferred that the function of this body is both to secrete the humor of the aqueous chamber and to carry on the absorption of all that is removed therefrom by such means."

"The opinion that the aqueous humor is derived from such a source, derives at least some support from the rapidity with which it is renewed after evacuation from the anterior chamber. The length of time required for its re-accumulation, under such circumstances, must indeed be very short, to enable M. Desmarres to say, in speaking of the accident of prolapsus of the iris, in making the section of the cornea for extraction: "Toutefois on aurait lieu d'esperer, en attendant quelques minutes et en recommandant au malade de tenir les yeux fermés de pouvoir reprendre l'operation inachevée. L'iris en effet ne tarde pas, par suite de la rapide reproduction de l'humeur aqueuse à l'éloignes de la cornée." And then the membrane of aqueous humor lining the anterior chamber is so thin, delicate and devoid of vascularity, as to lead us to seek for some other source from which so rapid a product can be derived. The part must be, indeed, highly vitalized which can so rapidly form such a function of secretion, and the degree of vitality in a secreting organ, at least, is by a law of physiology in direct ratio with its vascularity.

Hence Dr. R. F. Michel, and those who advocate with him such a source for the aqueous humor as that of the ciliary process, have, we think, a very fair amount of reason in support of their doctrine. The experiments of Magendie and others, on the facility with which fluids are taken up by venous radicles, might also justify the belief in the absorption of substances such as fragments of a broken-up lens being accomplished by the same structures here, seeing that this part of the eye at least is almost, if not totally, devoid of the other source of absorption. But pathologists are as yet divided in opinion as to the manner in which the removal of a broken-up lens is accomplished, whether by direct absorption or solution. Be this as it may, and even admitting that the removal of a broken-up lens is more rapidly effected in the anterior than in the posterior chamber (a fact which we do not think has yet been conclusively established), we cannot admit that the advantages thus to be derived from throwing the fragments into the anterior chamber are at all

commensurate with the evil consequences of such a procedure."

In conclusion, permit me to acknowledge my indebtedness to my brother and preceptor, Dr. Middleton Michel, Professor of Physiology in the Medical College of the State of South Carolina, for his valuable aid and counsel in the former preparation of this paper for the medical press, and for his important assistance as an injector and microscopist.

Such then is the nature of the facts, which, though they might be dwelt upon more discursively, are sufficient we deem to prove that structures so vascular as the choroid and ciliary processes were unquestionably destined to fulfil the high office which (*twenty-five years ago*) we assigned them.

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ART. II.—A MEDICO-LEGAL CASE—DEATH REPORTED TO BE CAUSED BY STRANGULATED HERNIA—BELIEVED TO BE DUE TO POISONING. Read before the Barbour County Medical Association (and ordered to be published) by PAUL DE LACEY BAKER, M. D., Eufaula, Ala.

*Mr. President and Gentlemen of the Association:*

If for no other purpose than strengthening his own resolution and fostering his own zeal in the discharge of a high and important duty, it is weightily incumbent upon each member of our Association to ponder earnestly and conscientiously upon the laudable and necessary purposes of our organization, and at our meetings to say and do something calculated to make them fruitful and efficient. It is well to reflect upon some, if not all, of the diversified and potent influences for good resulting from the effective operations of thoroughly organized medical associations, and to remember that frequent social and professional intercourse, with its mutual interchange of individual observation and experience, is gratifying, encouraging, and advantageous; promoting, as it always does, the reciprocal benefits of delightful friendships, dissipating the shadows of groundless

prejudices, rousing into life and activity the spirit of investigation, and in every way promoting that interest, zeal, co-operation, and union so absolutely requisite to the successful and honorable discharge of the personal and professional responsibilities that rest upon us.

Yet delightful as these re-unions are, much as we may value the opportunities thus secured us for a close communion with those whom we love and admire, pleasant as the relation consequent upon these meetings may be, still, such professional reliefs and personal gratifications are not among the prime and proudest objects sought to be secured by the organization of the "Barbour County Medical Association." Founded, as it is, with the view to invite and encourage investigation in the science of medicine, and to stimulate and make more zealous its votaries in their arduous and untiring search after truth, it has for its chief aim, an ambition no less lofty and a purpose no less great than the advancement of medical science and the maintenance of the dignity and the honor of the profession to which we have consecrated our talents and our lives.

While it is unnecessary to my purpose to dwell at any length upon the curious facts which prove how essential public professional organizations are to the cultivation and development of the best characteristics of man's moral and intellectual nature, when unfortunately the culture and improvement of the one and the energies and ambitions of the other must be nurtured and kept alive amid the rust and the mildew consequent upon the chilling and blighting influences of wide separation and long-continued isolation, yet it is not foreign to my design to touch briefly upon this strange and important truth, and remember that as polish and beauty are given to the hard stones and rough shells upon the sea-shore by the attrition consequent upon the buffeting and tumult of the waves, so in human nature is dullness removed and obliquities corrected and asperities softened by the association, contrast, and conflict consequent upon the communion, emulation and rivalry so neces-

sary to the earnest life and the honorable and useful activity of man's moral and intellectual existence.

As the effects of exercise and sunlight are absolutely necessary to the security and development of physical health and strength, so is the stimulus of competition and criticism and the light and influence of observation and contrast requisite to the culture and improvement of the moral worth and the advancement and effectiveness of intellectual power.

In contemplating then stern facts and investigating truths, we must regard human nature as it is, and not as we imagine it ought to be. We may lament that the God-like attributes of man are not imbued with an inherent purity and power capable of elevating him to greatness and goodness; but we must not forget in the regret that stimuli and restraints addressed to his lower propensities and weaker characteristics are positively necessary to that great and glorious result.

It is a fact, and it behooves us to remember it, that human nature demands for its guidance and control a system of rewards and punishments; and it becomes us here to recognize the truth, and not forget it, that the endorsements and approvals, the rejections and condemnations of this Association, made potent and effective through its organization and convocations, will influence the deportment, improve the morale, and cultivate the minds of the medical men of our county as the cutting and grinding and polishing of the lapidary develops the beauty and enhances the value of the precious stones submitted to his skillful art.

A brave and zealous recognition of the valuable truths will wake into activity that laudable ambition, rouse into energy that praiseworthy spirit of emulation, and stimulate into sensitive and glorious vitality that manly magnanimity and nice sense of professional honor that will reveal frequent and splendid exhibitions of impulses and abilities which might otherwise have remained dormant and as profitless and obscure as the undiscovered treasures of the earth.

Influenced, then, by an Association wisely organized and

faithfully and earnestly maintained, we will, as I have said, be prepared, if not to advance the science of medicine, at least to defend and sustain the dignity and honor of the Profession.

Encouraged and supported by the influence and power of the Association, we, each and all of us, can be courageous and efficient in not only detecting, but also in combating the carelessness, errors, irregularities, and evils so apt to exist in a loose and unorganized state of the Profession, and so injurious and derogatory to its dignity; so insulting and damaging to the certainty and value of the science of medicine.

Thus is it, that we may teach the other learned professions and the laity, too, to entertain respect for our vocation, and to feel a reliance and confidence in the science which we cultivate. Thus is it, that if we cannot silence, we may at least creditably limit that disparaging adage, that "doctors disagree." Thus may we hope to teach men to entertain respectful consideration for physicians and admiration for and trust in medicine in the buoyancy of their health and strength, as well as in the weakness and timidity and despair of sickness. Thus may we teach men to call upon and consult us in their investigations when they desire light and truth, and not when they want contradiction and conflict and doubt and darkness.

I offer these remarks as a suitable preface to the matter which I propose to present for the consideration and decision of the Association.

In determining the way in which I might discharge the duty assigned me by order of the President, I have selected a subject for discussion which I think well calculated to attract the attention and secure the interest of all the members of the Association, not only by reason of its intrinsic importance, but also because of accidental circumstances and associations which impart to it local significance and personal interest.

The subject involves a medico-legal question of moment, and is not only well calculated to challenge observation, but has, in-

deed, already called forth much comment and criticism, both in and out of the Profession.

Unfortunately, like most medico-legal questions, it involves a conflict of medical opinion and presents a startling instance of the lamentable fact, that "doctors *do* disagree"; doctors, too, who, by reason of their education and experience, ought to be regarded as fair exponents of established principles in medicine, and whose contradictions and disagreements under certain circumstances cannot but injuriously compromise the dignity and reliability of medical science.

Under the existence of this fact alone it would be a perfectly legitimate subject for investigation here, and it is, therefore, with confidence that I ask the attention of our body to a careful, dispassionate but positive consideration of its merits.

In view of the importance of the matter as bearing upon the reliable ability of the medical philosopher to institute a successful examination into causes, symptoms, and effects, and thereby to accomplish a truthful analysis of appreciable phenomena; and as touching the certainty and value of medical science in determining with clearness and precision upon given facts concerning which observation and experience and scientific analysis can be brought to bear, I here presume to request the Association to resolve itself into a committee of the whole, and (not as men with individual predilections and personal preferences, but as unbiased physicians, acting for and speaking alone in the interest and vindication of the truths and principles of medical science) pronounce upon the points at issue in the case to be presented.

I must beg to remind you, gentlemen, that in the full and faithful discharge of our responsibilities, we cannot afford to console ourselves with the reflection, that our science has truth and value in it, and that the one cannot be obscured or the other diminished by any conflict of opinion on the part of individual members of the Profession. Let us recollect that even the dignity, the power, the purity, and the truth of God's holy religion may, as far as its influence upon humanity is con-

cerned, be compromised and weakened and tarnished and obscured by contradictions and dissensions among those who claim to be chastened by its sweet and saving influence, and guided and controlled by the power of its grace and the light of its truth. If this be so, what, then, is there upon earth so unquestionably true, so transcendently valuable, so irresistibly convincing, that its principles may not be insulted and injured by vacillation and contradiction on the part of its votaries who should be enlightened by its truth and empowered by its force.

Finally, let me beg each and every member of our Association to remember, and never forget, that the physician's business is, preëminently, the search after truth, and that having found it, *he* is oblivious of his high vocation and recreant to his solemn trust, who fails to cherish and defend it everywhere and under all circumstances.

Before proceeding further, I must be allowed to express my disappointment and regret at the absence of my friend, Dr. Weedon, of Eufaula. Two or three weeks ago I informed him that I would introduce this matter for discussion here, and that I would controvert his opinion with reference to it; I asked that he would be here to sustain it, and I begged that he would, at least, prepare its defence and entrust it to some representative in case he could not be present. I say this in explanation of any seeming unfairness in bringing up the subject in his absence.

CASE.

In the summer of 1869 a negro man, in vigorous health, was taken suddenly and urgently sick, and after an illness of six days died. Suspicious circumstances caused his wife to be arraigned for his murder by poisoning. I was requested to hear the testimony and give my medical opinion as to the probable cause of the death. Dr. Weedon, of Eufaula, was asked to listen to the evidence for the same purpose. Dr. Weedon gave it as his medical opinion that the death resulted from strangulated hernia. Notwithstanding the evidence showed that there existed "a kernel in the left groin" *above* Poupart's ligament, and

that once or twice when his attention was called to it, in the course of his illness, the patient said that it felt sore; I gave it as my opinion from *other* symptoms and circumstances that the death was caused by poisoning. While I recognized the probable existence of a hernia, I rejected the belief that it was strangulated; I did not consider violent, burning pain in the region of the stomach, with constant and uncontrollable nausea and vomiting, the *earliest* symptoms of strangulated inguinal hernia; they *were* the first in the case in question; I did believe that in a case of strangulated hernia, with urgent symptoms, the attention of the medical attendant would, in all probability, be directed by the patient to the seat of the trouble. This did *not* happen in the case in question. In a case of strangulated hernia, terminating fatally after six days' duration, and in which vomiting persisted throughout the time, I did believe that the ejection of stercoraceous matter would, in all probability, take place; nothing of the kind happened in the case in question. I did believe that an unsupported inguinal hernia would likely be irritated and rendered painful by the succussion consequent upon vomiting continued for several successive days, even though the cause of the nausea were entirely unassociated with the existence of the hernia. However, these considerations did not influence Dr. Weedon's medical opinion, and the doctors disagreed; and in consequence thereof the body was disinterred six days after death that a *post mortem* examination might determine the question as to the existence or non-existence of strangulated hernia. The examination disclosed the fact that a hernia *did* exist, but the doctors *still* disagreed as to its strangulation and as to the cause of death.

The woman having been committed to await the action of the grand jury at the following term of the Circuit Court, I not being in attendance because of sickness, Dr. Weedon appeared, and, as I understand, assured the solicitor that the man died of strangulated inguinal hernia. At all events, the case was dismissed and the woman discharged.

Now, let it be distinctly understood that I do not introduce

this case here that the question of poisoning may be considered, but that I call attention to it to ascertain if the medical opinion of Barbour county is, that the death resulted from strangulated hernia; and to this end I will read to the Association the statement of Drs. Daniel and Copeland, of Eufaula, who courageously and skillfully conducted the *post mortem* examination.

Supposing that it would be well to have it at the final trial, I wrote to these gentlemen, then in New York, for a statement of the results of the examination, and was kindly furnished with the following

STATEMENT:

NEW YORK, November 20, 1869.

We hereby state, that on the 7th of August, 1869, we instituted a *post mortem* examination upon the body of Daniel, a freedman, six days after his death.

The body was much swollen, but in a remarkably good state of preservation.

A small, compressible tumor was faintly perceptible in the left inguinal region above Poupart's ligament, and midway between the anterior superior spinous process of the ilium and the spine of the pubis.

A careful dissection showed the tumor to consist of a hernial sac, containing a small portion of ilium, and nothing else. The entire intestinal circumference was not sacculated. The portion of intestine contained in the sac was readily returned into the abdominal cavity without any enlargement of or other interference with the neck of the sac or the edges of the aperture through which it protruded.

The sacculated portion of intestine was decidedly discolored, but the discoloration did not extend in the least beyond the neck or mouth of the sac, and as there was no evidence of vascular engorgement or infiltration, we did not regard the discoloration as a pathological change, but as a stain only, and a *post mortem* result.

In our opinion there was a total absence of any evidence of

inflammatory action in the parts. There was not the slightest trace of serous effusion or exudation of plastic matter. There was no incrustation, no band, no adhesion. There was not the least evidence of general or circumscribed peritonitis radiating from the hernia, the textural integrity of which was as perfect as any other portion of the peritoneal surface, all of which was found in a normal state.

In our opinion there was no evidence that the existing hernia had been injuriously compressed, or in any way effected by strangulation. We further state, that there existed decided evidences of irritation and inflammation of the mucous tissue, extending throughout the alimentary canal; the evidences of congestion and inflammation being particularly marked in the œsophagus and about the pyloric orifice.

Z. T. DANIEL,
W. P. COPELAND.

This concise, yet remarkably lucid, comprehensive, and satisfactory statement, is creditable to the professional understanding of these young physicians, then only students of medicine, and affords gratifying proof of their accurate analytical perceptions and their clear appreciation of both physiological and pathological phenomena, and it furnishes all the data necessary in determining the question, whether or not death resulted in this case from strangulated hernia of six days' duration. Of course that part of the statement touching the appearance of the mucous membrane is not for consideration here.

Now, let us briefly renew the statement of Drs. Daniel and Copeland, and consider what reasonable interpretation can be put upon the phenomena revealed by their examination.

After announcing the existence of the hernia, they state that the sac contained a small portion of the ilium, and nothing else. No protrusion of omentum, no fœcal impaction, no fluid distension; and that the entire intestinal circumference was not sacculated; this was the fact (of course Dr. Weedon and I were present), not more than two-thirds of the calibre of the gut was included in the protrusion, and consequently there was no loop

of intestine in the sac. The improbability of fatal obstruction and strangulation under such circumstances is patent, but need not be insisted upon, since that improbability, of itself, is of but small importance compared with other significant and, perhaps, convincing facts yet to be presented.

The statement shows that the hernia was readily returned into the abdominal cavity without any dilatation or interference with the neck of the sac, or of the edges of the aperture through which it protruded. Do we find in this any indication that strangulation existed before death? How does such a state of things correspond with the fact, that in operating for the relief of strangulation, one of the greatest hindrances to the restoration of the bowel is the frequent occurrence of firm and intimate adhesions between the serous coat of the bowel and the sac, necessitating delicate and tedious dissection, or between the bowel and the stricture, extending round the entire circumference, and seriously interfering with the division of the stricture? How can the easy reduction of this hernia be reconciled with the declaration of Professor Gross, that "during the progress of the inflammation which precedes mortification, the bowel is *always* firmly glued to the adjacent parts?" And again, that the adhesion between the bowel and the edges of the hernial aperture is *always* sufficiently firm to prevent their separation?"

We come now to the examination of the most important feature in the phenomena presented for consideration, and, as it seems to me, the only one concerning which there need be doubt or discussion. I refer to the decided discoloration of the protruded nuckle of intestine. The question is, was the discoloration consequent upon congestion and inflammation? The answer to this inquiry must be sought both in the facts pertaining to the discoloration itself and to the existence or absence of other necessary evidences of inflammation.

The doctors state that the discoloration did not extend a line beyond the mouth of the sac, and that in the absence of all evidences of engorgement or inflammation, they regarded

the discoloration as a *post mortem* change, and a stain only.

Let us consider what basis there is upon which such an opinion might legitimately rest.

The immediate cause of the change in color in inflammation is a preternatural afflux or retention of blood, and varies in degree according to the character of the affected tissue and the intensity of the morbid action, being, as a rule, most distinctly marked in very vascular structures; therefore it is a prominent feature in inflammation of the peritoneum. It is always most distinct at the focus of inflammation, from which it gradually recedes until it is lost insensibly in the natural hue of the surrounding healthy structures. Being dependent upon the engorgement consequent upon this inflammation, it marks its area, and it is certainly not the natural history of inflammations of serous membranes to have precisely limited extent and well-defined margins, and therefore the discoloration consequent upon the morbid action is not characterized by an abrupt line of demarcation. The limit of discoloration in this case could not have been more distinctly marked had it been painted with a brush.

The reasonableness of the opinion, that the discoloration was a stain and a *post mortem* change, was further fortified by the observance of the facts, that the perfectly healthy peritoneal surface of the colon was deeply stained simply by its contact with the liver and gall-bladder; and by seeing the healthy peritoneal coat of the intestines deeply discolored all along their line of junction with the mesentery. These facts, taken in connection with the total absence of necessary concomitant evidences of arrest of circulation, or inflammation, amply justify and vindicate the opinion that the discoloration was a stain only, resulting in all probability from the *extra* abdominal situation of the portion of intestine and its close connection with its external fleshy investments for six days after death.

We come now to consider the fact that there was not the slightest trace of serous effusion or exudation of plastic lymph.

A knowledge of the natural history of inflammation, espe-

cially as found in serous structures, proves how annihilating is this fact to the reasonable supposition, that in this case death was the result of a strangulated hernia of the intestine of six days' duration.

Professor Gross, in writing upon the subject of inflammation, says that "obstruction of circulation, however induced, will, if permitted to continue, be soon succeeded by inflammation of a grade and character sufficient to cause, at least, an effusion of serum, if not also of other fluids. And again, he writes that "the rapid and profuse serous exhalations which occur in acute peritonitis are the appropriate product of the structure, and are generally poured out quite early in the disease."

In treating of fibrinous exudation, Professor Gross declares that "there rarely is *any* inflammation, however slight, in which there are not some deposits of lymph; that in many cases, and in certain situations, it constitutes almost the only product of the morbid action, thus in peritonitis the chief evidence, after death, that there existed an inflammation is the presence of lymph"; that "the capacity of furnishing lymph in inflammation is possessed in different degrees by different organs and tissues, depending upon the peculiarity of their organization, it being always poured out most freely by serous membranes, especially the pleura and peritoneum."

He further declares that the deposit of lymph generally begins soon after the inflammatory action, increasing with the disease, and he adduces experiences and cites experiments proving that the deposit takes place within the space of a few hours after the commencement of the inflammation.

Dr. John H. Bennett, the eminent Scotch professor, makes fibrinous exudation the indispensable condition of inflammation, and even goes so far as to propose the word exudation as a substitute for that of inflammation. In his treatise on inflammation, he declares that pain, heat, redness, and swelling, cannot be considered as essential to inflammation, whereas the state can never exist, however slight or however severe, without exudation of blood plasma.

Another author and eminent surgeon, Professor William Pirrie, says "that in every instance of undoubted inflammatory action an exudation of blood plasma occurs, and declares the symptom as essential to inflammation."

Such records show how justifiable these young physicians were in entertaining the opinion that there were no evidences of inflammation, since there existed no trace of serous effusion or exudation of the plastic matter.

Let me ask here, What are the conditions especially favorable to the exudation of plastic lymph in inflammation? Are they not rapidity and intensity of inflammatory action, a healthy state of the blood and the character of the tissue involved? Well, in this case, if it were one of strangulated hernia of the intestine, the subject was healthy and vigorous, the serous tissue was involved, and the inflammation was rapid and fierce and fatal; and yet a *post mortem* inspection fails to discover the least evidence of inflammatory action; none of the usual and essential phenomena are brought to light.

The statement further shows that there was found not the least evidence of general or circumscribed peritonitis radiating from the hernia.

Now, as sane doctors, let us ask ourselves if a hernia of the intestine could, by possibility, remain strangulated for six days, with violent symptoms from the first, and terminate fatally, and yet set up no inflammatory action in the parts? and if such morbid process were established, would it remain confined to the strangulated portion of the bowel?

Is it not by continuity of structure that inflammation is most likely to propagate itself, and does not the natural history of the disease teach us that when once kindled in a serous structure, especially the peritoneum, it is rapid and pervading in its action, and spreads as does fire over the grassy surface of the prairie? It would seem beyond possibility for strangulated hernia of the intestine proper to exist with violent symptoms for six days and terminate fatally, and yet peritonitis general or circumscribed be wanting.

Finally, we come to consider the fact that the textural integrity of the hernia was as perfect as any other part of the peritoneal surface, all of which was found in a normal state.

Now, once again, as sane doctors, let us inquire if strangulated hernia of the intestine could exist with violent symptoms for six days and terminate fatally, and yet the strangulated gut, in which, with its mechanically arrested circulation, all the inflammation was centered and confined for six days and nights, retain intact its structural integrity? No change of structure or consistence, no softening, no induration, no contraction, no thickening. Ah! gentlemen, the cast-iron bowels of a furnace *may* be inflamed with fire for six days without structural ruin, but vital intestines of flesh and blood, with mechanically arrested circulation, can't endure the destroying fires of an active and incessant inflammation for six mortal days and nights and perish, and yet retain their textural integrity. No gentlemen, the result would inevitably be molecular ruin as well as somatic death.

Upon the close of Dr. Baker's remarks, Dr. J. J. Winn, of Alabama, offered the following, which was unanimously carried:

*Resolved*, That it is the opinion of the Barbour County Medical Association, as here assembled, that the freedman (Daniel) did certainly not die of strangulated hernia.

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ART. III.—A CASE OF VAGINISMUS WITH STERILITY—CURE—PREGNANCY—WHOOPING COUGH—EFFECTS OF BELLADONNA IN SHORTENING AND FACILITATING THE FIRST STAGE OF LABOR. Reported to the Obstetrical Society of Louisville by J. A. OCTERLONY, M. D., Professor of Materia Medica and Therapeutics and Clinical Medicine in the Louisville Medical College, and President of the Society.

Mrs. ——, aged twenty-five years, has been married four years; is small and slender, has a fair complexion, blue eyes,

and light hair. Her health has always been delicate, and she suffered so much from rheumatism that since childhood she has rarely been entirely free from some manifestation of the rheumatic diathesis. It is now over two years and a half since I was first consulted by her. She had then rheumatic arthritis; the left hip-joint was most affected, and so closely did it simulate the common form of morbus coxarius in a somewhat advanced stage, that I was in doubt for some time as to the real nature of the joint-affection. After several months' treatment she recovered, and she now has perfect use of her left limb, but is still troubled at times with rheumatic twinges in different parts of the body. There seems to have been no cardiac complication at any time, and her heart is entirely free from disease.

In the early part of 1870 her husband sought my advice for his wife, who was again in bad health. I was told she had lost flesh, the appetite had almost entirely failed, she was nervous, and could not sleep at night. There was constant backache and bearing down in the lower part of the abdomen; the bowels were obstinately constipated, and she had an abundant and offensive discharge from the vulva, which had troubled her for a long time, and was occasionally quite irritating to the skin with which it came in contact. Though married several years, yet never had perfect connection. Indeed, he assured me he had not even succeeded in effecting a complete entrance. The reason alleged for this unnatural state of things was that the wife's parts were morbidly sensitive, and any attempt at connection caused her so severe pain that he invariably desisted, and for a number of months he had given up all hope of ever establishing perfect marital relations.

Shortly after this conversation the wife consented to an examination, and was placed under treatment. She confirmed the statements made to me by her husband, except upon those delicate points, of which I did not speak to her, and in regard to which no information was volunteered. I learned besides that she menstruated regularly, but with great pain, each period lasting usually about five days.

I found the ostium vaginæ very small, I might say virginal. The vulva and vagina were congested, and attempts to introduce the finger gave severe pain and caused spasmodic contraction of the sphincter vaginæ. So powerful was the contraction of the muscle that it offered a serious obstacle to the introduction of a speculum, and it was only with difficulty that this was finally accomplished. After several trials, gradually employing larger instruments, I was enabled to use Sims's speculum, not inflicting more pain than she could endure without an anæsthetic. There was cervical metritis and endometritis, and the upper part of the vagina was also inflamed. The leucorrhœal discharge was a mixture of morbid secretion from the cervical canal and the mucous membrane of the vagina. The body of the uterus was probably free from disease; the os internum, though it admitted the probe, was not dilated, the cavity was not enlarged, and the contact of the probe with the internal surface of the organ did not cause pain.

The frequent introduction of large-sized specula, which, on each occasion, were allowed to remain for some time, seemed to overcome the vaginismus in some degree; under local applications, the use of suppositories, and copious injections, the uterine and vaginal disease greatly improved, and complete and painless connection soon took place.

On the 15th of May, 1870, the access of a menstrual flow was noted; this continued up to the 20th of the same month, when it ceased, and has not since returned. When the next period was passed without the appearance of the flow, pregnancy was immediately suspected, and confirmation was soon obtained by the setting in of morning sickness and other early symptoms of pregnancy.

The applications to the uterus were now discontinued, although the local troubles had not yet been completely cured.

Various disorders incidental to pregnancy continued to trouble her during the whole period of gestation. She had nausea, and frequently vomited; heartburn was a constant source of annoyance and discomfort. Her bowels were habitu-

ally constipated; she suffered much from hæmorrhoids, and had a very troublesome and profuse leucorrhœa. She had no œdema of the feet at any time. For the relief of these disorders she took the remedies usually given. The extract of belladonna was very efficacious in removing constipation. Shortly after the sixth month had been completed a rather severe attack of whooping cough set in, and lasted over six weeks. The bromides of ammonium and potassium were given, and seemed to exert a very decided influence in diminishing the severity and frequency of the paroxysms. The extract of belladonna was continued with these remedies, and may have had some share in producing the good effects observed. The bromides were withdrawn as soon as the whooping cough had ceased, but the exhibition of belladonna was kept up until two days before labor set in.

It will be noticed that she took the extract of belladonna for nearly four months. The dose was an eighth of a grain, repeated three times daily, but it was not always taken with regularity, except during the time when the whooping cough was most severe. Toward the close of her pregnancy she took the medicine very irregularly, sometimes once a day, at other times only every other day. These intermissions were necessary, for the longer she took the extract of belladonna the more susceptible she became to its effects, and during the last month there would be dilatation of the pupils and dryness of the throat. As already stated, constipation was completely relieved by its use.

I have noted that sometimes belladonna seemed to hasten and facilitate the stages of dilatation, and the same observation had previously been made by others. In order to secure my patient this advantage, I urged her to take the medicine as stated, and the result fully justified my expectations.

In the forenoon of the 15th of February, 1871, I called on her, and found her comfortable and perfectly free from pain. She did not expect labor to come on until a week later; but about 10 o'clock in the evening of the same day she had slight

pain, and sent for me. I came to the house at 11 o'clock P. M. The pains were quite trifling, and came at long intervals.

The fœtal heart was heard very distinctly to the right of the median line, midway between the navel and the anterior superior spinous process of the ilium; the cervix was soft and open, the os measured between two and three inches in diameter, and the vertex presented in the left occipito-posterior position.

She vomited repeatedly, and suffered from almost continuous nausea, and had muscular tremors, but her pulse remained strong and calm, and never rose higher than a few beats over seventy. An enema was ordered to clear the lower bowel, and the patient was placed on her left side, in the prone position, in order to facilitate rotation forward. At 12 o'clock the pains were becoming strong and frequent; nausea and vomiting continued, but the pulse remained quiet. At 3 o'clock A. M. the pains had increased much in strength and frequency; about this time the membranes ruptured, but only a very small quantity of water escaped, and the occiput had rotated forward under the pubis. Delivery was accomplished, the child, a well-formed boy, had the cord twisted around his body, and weighed seven pounds. The placenta did not come away until nearly half an hour after the child had been born; the delay was probably due to the fact that the uterus contracted abnormally, forming a long, narrow cylender, the fundus lying up in the left hypochondrium. By gentle but persistent manipulation the uterus was made to assume its proper form, and the placenta was delivered, immediately after which the patient took a dose of ergot. There was no flooding, but she had a severe and protracted nervous chill, during which, however, the pulse did not rise in frequency, nor did it change otherwise. Later in the day she still suffered with nausea, and had vomited several times since. I left her about four hours before, but two doses of morphia speedily relieved her.

Five and a half hours after delivery her pulse was 64 per minute, temperature 99°; twelve and a half hours after delivery her pulse was 68 per minute, temperature 100½°; sixteen

hours after delivery her pulse was 60 per minute, temperature 99°; thirty, fifty-four, and seventy-eight hours after completion of labor her pulse and temperature did not rise higher than 64 and 99½° respectively. Milk commenced to be secreted within forty-hours after delivery, but no further increase in the frequency of the pulse or rise in temperature marked its access. The puerperal period was safely passed without any complication, and both mother and child did well.

This case possesses numerous points of interest; among them the rather easy cure of vaginismus without Sims's operation, and the speedily following pregnancy, are not the least in importance, although the latter event must be chiefly ascribed to the improvement of the uterine disease consequent upon the local treatment.

The occurrence of whooping cough during pregnancy must be somewhat rare, perhaps because most grown persons have already passed through this disease during childhood.

Constadt remarked,* that among adults pertussis is more frequent in women, and that pregnancy, and the puerperal state especially, predispose to it. In this case I was prepared to find the child affected with whooping cough, as in the case quoted by Sir Thomas Watson,† but I was agreeably disappointed.

I have not been able to ascertain with what frequency whooping affecting a pregnant woman is transmitted to the offspring. Constadt does not say anything on this point, except that quoted above; the only case recorded, so far as I can learn, is that of Sir. Thomas Watson. The period of pregnancy, and the duration of the disease, might be expected to have considerable influence this way. Whooping cough coming on during the latter weeks of pregnancy, would probably be more likely to be transmitted to the fœtus than if it set in during the earlier months of gestation, unless the disease should run a very protracted course.

I have rarely seen a case of labor, more especially in a pri-

* Pathologie und Therapie., vol. 1., p. 643.

† Practice of Medicine, English edition, vol. 2., p. 66.

mipara, in which the state of dilatation was so easy and painless, and I believe this was owing to the extract of belladonna. I have seen a number of cases in which, apparently, this medicine produced the same effect, and I have heard of cases in the hands of other physicians in which it appears to have produced similar results; but in none was the effect so very decided as in this case. The prolonged administration of the remedy may account for the difference.

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ART. IV.—CASE OF EXTROVERSION OF THE FEMALE ORGANS—COMPLETE OF THE WOMB, PARTIAL OF THE VAGINA, WITH CYSTOCELE AND RECTOCELE—OPERATIONS AND RESTORATION OF THE PROLAPSED PARTS. By PAUL F. EVE, M. D., Nashville, Tenn.

Mrs. ——, coming from Mississippi, aged 45 years, was directed to me the first of last June, by a professional friend, to be relieved if possible of her very unpleasant condition. Hers was one of the many hard cases resulting from the late war, even occurring among women. Reduced by it to hard labor, losing her husband, after giving birth to four children, the uterus had remained procident for four years. On examination, this organ was found pendant between the thighs, and from its enlarged, ulcerated mouth there was a constant bloody muco-purulent discharge. There were also two large tumors projecting, one anteriorly formed at the bas-fond of the bladder, the other posteriorly by the rectum, the mucous surfaces of which, by long exposure and friction, resembled the skin. It had all the appearances of ordinary dermoid tissue. The lateral parts of the vagina did not descend as much as the portions reflected on the bladder and rectum. The patient believed menstruation had ceased. Micturition and defecation were not much interfered with by the presence of this extensive prolapsus.

After preparing the case, emptying the adjacent organs, and

placing the patient in the position of lithotomy, a careful dissection of the perverted mucous membrane was made from the cystocele, commencing half an inch behind the os vesicæ, and extending it to about the same distance of the os tincæ. This broad, denuded surface was now closed longitudinally to the vagina by some half dozen silver sutures, avoiding, of course, the internal coats of the bladder. The next step was a similar proceeding to relieve the rectocele, in doing which, unfortunately, owing to the thickened, toughened recto-vaginal septum, the intestine was punctured, and, though immediately and accurately secured by five metallic stitches, a fistula resulted to embarrass and delay the treatment. The flap should have been reättached over this opening, and the sphincter ani divided, as experience has taught. Episio-perineoraphy completed this first operation.

On the 12th, nine days afterwards, the attempt was made to bring down and secure the posterior wall of the vagina to the perineum, so as to close the fistula, but failed, though the opening then had been reduced to the size of a buck-shot, and was healing up under caustic, but which was again enlarged by the tip of the finger in directing the needle, from an unexpected movement of the patient under ether.

Nine days after this the recto-vaginal fistula was obliterated by sutures, and dividing the sphincter ani at two lateral points; and shortly afterwards, as accessory to the cure, the perineum was united up to the labia minora. In a week the patient was up in her room, spent the next day out, and left for the country, homewards, the forty-fifth day after the first operation.

It is right to state that in addition to the complication from that most disgusting of all fistulæ, recto-vaginal, we had to contend, in the treatment of the case, with terrible attacks of facial neuralgia, a chronic herpetic eruption and boils, aggravated by the heat of midsummer; and all intensified by the necessity of locking up her bowels for days. The lady, however, displayed great fortitude, and an excellent spirit at all times.

My neighbor, Dr. Curry, was associated with me in the case,

and Dr. McKay also assisted, as did Drs. Menees, Buist and Grizzard. Dr. Briggs was invited twice, but did not come.

In the review of Dr. Isaac E. Taylor, Emeritus Professor of Obstetrics in New York city, by Dr. Whitehead, in the July No. of the "American Journal of the Medical Sciences," is the notice of a case similar to the above, presenting likewise a cystocele and rectocele. In my case the opinion affirmed by Mr. Huguier, that cases of procidentia uteri are in reality only elongated hypertrophied cervix of that organ, is not tenable; since the whole of that organ was seen and felt exterior to the pelvis. There was no marked eversion or erosion of the os, and the discharge ceased, as was expected, soon after the womb was kept in situ.

## ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—TREATMENT OF PLEURITIC EFFUSION. By JAMES CUMMING, M. D., Professor of Practice of Medicine, Queen's College, Belfast.

The operative treatment for effusion in the pleural cavity has recently been the subject of some important observations. The value of thoracentesis—an operation which dates from the earliest times of medicine—has been variously estimated by many of the most eminent observers. Laënnec seems to have entertained little confidence in its utility. Dupuytren performed the operation frequently, and with fatal results in the great majority of his cases, so that in his last illness, when it was proposed to him to allow his chest to be tapped for the relief of a copious pleuritic effusion which existed in it, he is reported to have refused, saying that he preferred to die by the hand of God, than by the hand of man. In this country the operation

was regarded with little favor, notwithstanding the energetic advocacy of a more extended application of it by Dr. Thomas Davies and Dr. Hamilton Roe. It is to Trousseau probably more than to any other that the more frequent employment of this procedure in recent years is owing. Dr. Bowditch, of Boston, has also performed thoracentesis very frequently, and with great success, and his experience has had much influence in popularizing the operation. Nevertheless, there can be no doubt that there is a wide divergence between the practice of physicians in this kingdom and that adopted on the continent with regard to tapping the chest.

The opinion prevalent in this country seems to be that thoracentesis is not to be had recourse to during the acute stage of pleurisy, merely in consequence of the effused fluid having reached a large amount, unless other urgent symptoms, such as marked dyspnœa, have arisen. On the other hand, Trousseau has laid it down as a rule, that the chest must be at once tapped in all cases in which there is dullness from the base of the lung to the clavicle in front, and to the supra-spinous fossa behind, with displacement of the diaphragm, liver, spleen, or heart. The danger which he apprehends from this condition, and which he regards as rendering the operation imperative, is that of sudden death apparently from syncope. Some doubt* has been thrown on the likelihood of this mode of fatal issue being a legitimate result of the disease, and it has been suggested that antiphlogistic measures adopted to combat the malady may have had much to do with the production of syncope. The termination of acute pleurisy in sudden death has, however, been too often observed in the absence of any lowering treatment to render this explanation satisfactory. Quite recently Dr. Sutton† has recorded a case in which death suddenly occurred in acute pleuritis with only a moderate amount of effusion, not exceeding forty ounces. Another case of a similar

* Gairdner, Clinical Medicine, p. 374.

† British Medical Journal, July 17, 1870.

kind occurred with the cognizance of the writer of this report. Trousseau has suggested that the explanation may be that the displacement of the heart by the pressure of the fluid may cause such a degree of tension of the large vessels that the passage of the blood through the aorta may be materially interfered with, and that as a result of any unusual effort on the part of the patient, the circulation may be altogether arrested; or that in some instances it may occur in consequence of the diminished flow of blood through the vessels giving rise to the formation of thrombi in the cavities of the heart.

Bartels,* who has contributed a paper of great value on the question of the operative treatment of pleuritic effusions, has had several opportunities of making *post mortem* examinations of the changes produced by pressure in the position of the heart and great vessels. He states that the most important effect as regards the circulation is that produced on the intra-thoracic portion of the inferior cava and on the right auricle of the heart, and draws attention to the fact, that when effusion takes place in the left pleura, it has more influence in producing stoppage of the circulation than when it occurs in the opposite side. In a case of left-sided pleuritic effusion, Bartels found that the heart had been pushed to the right side, so that it assumed an almost vertical position, with the apex resting on the depressed diaphragm, that the lower wall of the right auricle was folded on itself, and that the inferior cava immediately above its emergence from the foramen quadratum was bent at right angles. This condition of parts must have interfered considerably with the return of blood to the heart, and the effect of any sudden exertion under such circumstances might readily be to altogether cut off the flow of blood through the cava for a short time, and thus bring about a fatal syncope.

In many cases of acute pleuritic effusion, it has been found that after tapping, the fluid does not again accumulate. Trousseau has recorded instances of this, and the same fact has been

* Deutsches Archiv. fur Klinische Medicin. Band. iv.

noted by other observers. An interesting case,* in which tapping the chest was followed by complete and rapid recovery of the patient, has been quite recently recorded by Dr. Constantine Paul. In this case the enormous amount of above nine pints of fluid were withdrawn from the chest at a single operation. No fresh accumulation took place, and the patient recovered without a single symptom of disturbance from the thoracentesis.

Professor Kussmaul† reports with great care and fullness the details of sixteen cases in which thoracentesis was performed in his own practice. In six of these, in which the operation was performed under urgent and almost desperate circumstances, permanent recovery followed. Of these six cases, five were owing to acute and chronic empyema, and one to acute pyopneumothorax. In a seventh case life was prolonged for a year and a half. In an eighth case, one of acute pleuritis with purulent effusion, the first operation decidedly injured the condition of the patient, probably in consequence of having been too early performed; subsequent operations, however, became necessary, and the patient died phthisical a year after. The ninth case terminated favorably, but not on account of the tapping. The tenth case was an empyema of necessity, with a great amount of pericardial effusion. The eleventh, a similar empyema, with advanced disorganization of the pleura; both of these cases ended fatally. The twelfth and thirteenth were cases of pyopneumothorax, in which the operation was only performed with the view of palliating the sufferings of the patient, which object was satisfactorily accomplished. The fourteenth case was one of tubercular pleuritis, with hæmorrhage at the pleural sac, and was also relieved. The fifteenth and sixteenth were cases of acute pleuritis, with extensive serous exudations, and both ended fatally.

It becomes accordingly a matter deserving the serious atten-

* Dr. C. Paul. Bulletin Général de Thérapeutique, Dec. 15, 1869.

† Deutsches Archiv., Band. iv.

tion of physicians whether the employment of thoracentesis might not be advantageously somewhat extended in cases of acute pleurisy with very copious effusion, even in the absence of symptoms of an urgent character.

With regard to chronic effusion, the arguments in favor of the operation are still stronger. In this country it is not considered advisable to tap the chest in consequence of the presence of the fluid, even in considerable quantity and remaining for a long period, if there is reason to believe that it is of a serous and not of a purulent character.

There are several considerations possessing weight which are favorable to the adoption of operative interference at a comparatively early period. Certain changes of some prognostic importance have been found to take place in the ribs and their cartilages in cases of chronic pleuritis. A process of ossification of the cartilages is found* to take place even in young subjects, and an enlargement frequently to a considerable extent of the ribs themselves. The effect of these changes may, as has been shown by Bartels, be very prejudicial to a complete removal of a chronic effusion. If the lung is bound down by false membranes so as to be unable to expand, or if the pulmonary tissue itself has undergone such changes as to render it no longer capable of expansion, then the only way in which the pleural surfaces can be approximated so as to obliterate the space between them and permit of the absorption of the fluid, is by the yielding of the chest walls. It will be easily understood that the possibility of this yielding depends, in a great degree, on the elasticity of the parietes, and that any change which increases their rigidity offers an obstacle which may be an insuperable one to this change of shape, without which removal of the fluid is impossible.

Other considerations favorable to an early performance of the operation are derived from the changes which a lung, which

* Parise, Archives Générales. 1849. Wintrich, Die Krankheiten der Pleura. Virchow's Handbuch der Spec., Path. 1855.

has been subjected to long-continued pressure, is liable to undergo. It is remarkable how completely this organ may retain its power of being inflated, even after having been compressed for a long time, but it does occassionally happen that changes occur in its texture which render it no longer capable of admitting air. The false membranes also, which bind down the lung, may undergo a process of development which may render their yielding impossible, and in this way the expansion of the lung may be prevented.

It has long been known that a tubercular condition of the lung is one of the causes of pleurisy; there is every reason to believe that the converse of this proposition is also true, and that the existence of a chronic pleurisy may be a cause of phthisis. Nor is this difficult to understand by the aid of the additional breadth which our conceptions regarding the nature of pulmonary consumption have recently received. When one lung is compressed, so as to become useless, the needs of circulation must throw such an additional amount of work on the unaffected lung as to cause a hyperæmic condition of it. This tends to the production of a catarrhal condition under slight exciting causes, and it must be remembered that the free play of the unaffected lung is seriously interfered with, partly owing to pressure through the mediastinum, partly by the pain caused by the respiratory movements, partly to the interference with the diaphragm by the fluid effused. These are precisely the conditions which favor an accumulation of the products of bronchial catarrh within the lung, and the developement of those morbid processes which are now regarded as constituting one of the most frequent forms of pulmonary consumption.

It is a fact well known to practical physicians that effusions, which there is every reason to believe to be merely serous, will for a long time resist all measures adopted for bringing about their absorption. In many instances they cause no apparent injury to the health or strength of the patient; in others they merely diminish his capacity for exertion, and render him unable to rapidly ascend stairs and the like, but otherwise seem to

exercise little prejudicial effect. In such cases the question arises, how far a physician is justified in leaving matters in *statu quo*, after rest and tonics and diuretics and iodine have failed in causing absorption. It cannot be a matter of indifference to the future of a patient to have a dislocated heart or a depressed liver, even if he does not suffer from the abnormal condition of these important organs at the time. Besides, there is always a risk that, under the influence of intercurrent disease, the fluid in the chest may become purulent. No physician would hesitate to remove such an effusion if it could be done without exposing the patient to serious risk. In a case recently under the care of the writer, effusion was found to exist in the left pleura, displacing the heart to the right side, and causing dullness as high as the clavicle. It had accumulated without any marked chest symptoms, and also without any considerable febrile reäction. When the patient came under observation, he had been blistered over the affected side, and otherwise treated with a good deal of activity. Iodide of iron, diuretics, rest, and abundant nourishment were prescribed with no perceptible effect upon the amount of fluid, or on the measurement of the chest. The question arose, how long it was justifiable to proceed with remedies of this kind under the circumstances. The patient was, to all intents and purposes, well, but unable to work, from the dyspnœa which exertion caused, and he had a family dependent on his exertions. Thoracentesis was decided upon, a fine tubular needle was introduced between the sixth and seventh ribs, and 20 ounces of serum removed by suction, by means of an instrument to be described. Two days after, a similar amount was removed. The little operations were almost painless, no suffering being caused except by the trifling prick of the needle. No cough or other unpleasant concomitant occurred, and absorption proceeded rapidly, so that in a week the patient left the hospital, and in another fortnight very little dullness, and no displacement of the heart remained.

Professor Ziemssen,* of Erlangen, recommends strongly that

* Ziemssen, Deutsches Archiv., vol. v., 457.

thoracentesis be performed, even in cases of non-inflammatory hydro-thorax occurring in connection with cardiac or pulmonary disease, with tumors in the chest, or with Bright's disease, when the pressure on the lungs has attained such an extent as to give rise to deficient æration of the blood or insufficient circulation in the lung. In accumulations of fluid under these circumstances, the operation can be considered as merely palliative, but it has been found to afford a considerable amount of relief. Ziemssen records the case of a patient in whom there were present mitral insufficiency, hypertrophy of the heart, granular kidneys, and general anasarca, and in whom hydro-thorax was present in both sides. The chest was punctured during his illness sixteen times, with marked relief to the dyspnœa. In these different operations above 20 pints of fluid were removed, and Ziemssen expresses his decided belief that life was considerably prolonged, as well as rendered much more comfortable by his interference.

The practical rules laid down by Bartels regarding the selection of cases in which thoracentesis is to be performed, are worthy of consideration.

In all cases of simple serous effusion, accompanied by signs of displacement, the operation is requisite if the physical signs show that absorption has not commenced within a moderate time.

It is not advisable to operate as long as febrile symptoms are present, unless there be urgent symptoms, such as distinct and considerable embarrassment of the circulation or of the respiration.

The entrance of air into the pleural cavity is to be carefully prevented in cases of serous effusion.*

Purulent effusions are best treated by the establishment of a

* Hence, if the physician believes that this entrance of air be really a source of danger, and not simply one of the chimeras of clinical medicine, the differential diagnosis between hydro-thorax and empyema should be clearly and absolutely made. The use of the aspirateur or the ordinary hypodermic syringe will decide this question.—ED.

large fistulous opening, which permits a continuous discharge of the thoracic contents. If these effusions are removed by the trocar, they rapidly accumulate afresh and exhaust the patient.

If, on puncturing the chest, an effusion which has been regarded as serous, is found to be purulent, it is advisable to remove the trocar and make a pretty large opening at once.

The effusion is almost invariably purulent if pleurisy has occurred in connection with pyæmia, puerperal fever, and the like; if a febrile condition continues without any other cause after the effusion has ceased to increase, it is certainly purulent if œdema of the subcutaneous cellular tissue exists on the affected side.

If pneumo-thorax coexist with purulent effusion, the operation is indispensable to prevent the contamination of the system by septic fluids.

To prevent septic infection, it is necessary to cleanse the pleural sac daily, either by injections of water, or of a weak solution of common salt, or by insufflation of air.

As regards the choice of an instrument, and the mode in which the operation is to be performed, we may be permitted to say a few words, inasmuch as this may be regarded as common ground for the physician and surgeon. Opening the cavity of the thorax by means of a bistoury is reserved for those cases in which a permanent fistulous opening is required. The trocar is the instrument usually employed, and Wyman's instrument has been frequently used in connection with the trocar.

The present writer regards an instrument which has very recently come into use, as affording facilities for the safe performance of the operation, such as did not before exist. It consists* in a strong glass tube, about the size of an ordinary

* A good deal of discussion has taken place regarding priority of invention with respect to this instrument. The instrument used by the writer is that called the Pneumatic Aspirator of Dr. George Dieulafoy, of Paris, and has been patented by the Messrs. Weiss, the well-known instrument makers. An instrument identical in principle, and closely resembling it even in detail, was exhibited by Dr. Protheroe Smith at the recent meeting of the British Medical

stomach-pump syringe, and fitted up in the same manner with two cocks. In this is an air-tight piston, by pulling up which, with the cocks closed, a vacuum can be formed. For the instrument is arranged a series of tubular needles and trocars, beginning at the ordinary size, and decreasing to the finest calibre compatible with sufficient strength. In examining for a pleuritic effusion, it is necessary to introduce the needle into an intercostal space sufficiently far to cover the little lateral openings in it. Then it must be connected with the air-pump, and the cock communicating with the interior of the pump opened, so that the cavity of the needle forms a part of the vacuum. The needle is then to be slowly pushed forward. In this way the tissues are traversed with a tube connected with a vacuum, and the instant the fluid is met with, it immediately rushes into the glass pump, and its character can be at once recognized.

The advantages of this instrument are at once apparent. Among the objections to the operation, is certainly to be reckoned the possibility of an error of diagnosis. Now, although in the vast majority of cases, error is by no means likely, it must be remembered that it is far from impossible. The case of a distinguished member of the profession, Dr. Dolbeau, of Paris, has recently attracted a good deal of attention, and has been freely commented upon by the Parisian medical press. In the case* of this gentleman, fluid was believed by some of his medical attendants to be present in the pleura, and, although there was a difference of opinion as to the diagnosis, it was de-

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Association in Newcastle-upon-Tyne. Dr. Smith claims to have invented and employed this instrument several years before Dr. Dieulafoy's introduction of his aspirator. A commission of the Academy of Medicine of Paris, consisting of Messrs. Broca, Jules Guerin, and Denonvilliers, examined into the question of priority, and reported at the meeting of July 27th, of the present year, that an instrument identical in principle had been exhibited by M. van den Corput, Professor in the University of Brussels, as early as 1855, and that M. Langier, the well-known surgeon, had also about the same period employed a similar instrument. The report of the Commission will be found in the Archives Générales for September.

* Gazette Hebdomadaire, May 6, 1870.

termined to puncture the chest. Two punctures were made without result, and the needle penetrated the lung in both instances without producing any bad effects. Twelve days later a considerable amount of fluid was found, and removed by operation. It was the opinion of Barth, an auscultator of the highest eminence, that fluid was present in the first instance, but that local adhesions had occurred at the sites of the puncture. It is known that even in the hands of Laënnec, the liver was once perforated by a trocar in an operation of this kind. An advantage of no mean importance in the employment of this instrument consists in the harmlessness of such errors; as the puncture of the lung by the fine needle employed is not found to be followed by any evil results.

Another advantage is the comparatively painless character of the operation. Not only is the puncture itself attended with very slight pain if a fine needle be used, but the removal of the fluid, which takes place very slowly and gradually, is not accompanied by the troublesome paroxysms of coughing, which have been noticed to attend the evacuation of the chest by the ordinary means. These points were brought under the notice of the profession by Blachez,* who advocated an operation which he described as capillary thoracentesis. The admission of air is also completely prevented, and although the experience of those who have employed the operation repeatedly does not point to this accident as one of much importance, still it must be regarded as a thing to be, if possible, prevented.

Experience has shown that it is not by any means necessary to withdraw the whole of the effused fluid. The removal of a portion is in many cases all that is necessary for the promotion of absorption. Once the excessive pressure has been diminished, the increased activity of the absorbents becomes sufficient for the task to which they had been before unequal.

A method of employing the syphon-principle in the removal of fluid from the pleural cavity, in combination with a mer-

* Bulletin gén de Thérapeutique, November 15, 1868.

curial pressure-gauge, which enables the operator to ascertain at any moment the degree of fluid-pressure within the pleura, and the amount of syphon-power employed, has been suggested by Dr. Douglas Powell.* If the syphon-principle be adopted in the operation of thoracentesis, the pressure-gauge will certainly be found an important aid in regulating its application; but there is no very obvious advantage to be gained by the employment of the syphon. An exhausting syringe seems to afford an equally efficacious, as well as a more convenient and manageable mode of withdrawing the fluid.

An instance of a totally different method of dealing with pleuritic effusion has been reported by Glauert,† from the clinic of Niemeyer. The treatment adopted was a modification of what is known in Germany as the Schroth cure. The patient was forbidden to take any drink or fluid nourishment whatever, and his diet consisted of bread and slightly-salted sausages. The attack of pleuritis had lasted fifteen days before this treatment was commenced, and the physical examination revealed effusion in the right pleural cavity, extending upwards to the third intercostal space; all febrile reäction had ceased. During the first two days of the treatment the patient suffered greatly from thirst, and was scarcely able to swallow anything, owing to the dryness of his mouth. He adhered, however, rigorously during three days to the directions given him, with the exception of licking with his tongue some of the moisture deposited on the inside of the window panes.

During the three succeeding days he was allowed half a pint of wine daily. The amount of urine secreted during each of these three days averaged only fourteen ounces and a half. Absorption of the fluid took place rapidly. On the fourth day of the treatment friction sounds reäppeared, and on the sixth day dullness was only recognizable immediately above the liver. The patient was now permitted to eat and drink as he pleased,

* Transactions of the Clinical Society of London, vol. iii., p. 240.

† Berlin Klinische Wochenscrift, February 7, 1870.

and in two days was completely well. His appetite and general condition were good, and all traces of effusion had disappeared. It seems from the experience of German physicians that this highly irksome and disagreeable plan of treatment can be put in practice without risk to the future health of the patient, in the majority of cases at least.—*Dublin Quarterly.*

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ART. II.—THE DIAGNOSTIC AND PROGNOSTIC VALUE OF HEART-SOUNDS. By AUSTIN FLINT, M. D., New York.

It is difficult, without the lessons of clinical experience, to appreciate the fact that the intensity and quality of heart murmurs are not of much account in judging of the importance of valvular lesions. A murmur very loud, notably rough or musical, it would seem, should denote graver lesions than one which is feeble, soft, and blowing. Experience, however, shows that it is not so. A striking illustration of this fact came under my observation some time since. A gentleman from Cuba consulted me for disease of the heart. He had a musical murmur loud enough to be heard with the ear removed some inches from the chest. The sound had attracted his attention, and this first led him to see a physician. He was told that he had disease of the heart, of which he had previously had no suspicion, having no ailments referable to that organ, and, indeed, considering himself perfectly well. He became at once a medical curiosity, and he had been examined by many physicians. The case exemplified the fact that the diagnosis of a cardiac lesion is sometimes a misfortune. The man had no peace of mind after the discovery of the murmur. He relinquished his business, and came to this country for medical opinions. The lesion, as regards present importance, was innocuous; and had he remained ignorant of its existence, he would not only have been contented and comfortable, but his condition would probably have been more favorable for the preservation of health.

It folllows, from what has been said, that with reference to prognosis, it is important to go further in diagnosis than to determine, from the presence of mumur, the existence of an organic disease of the heart. If we except the accident of embolism, we are warranted in saying that, as a rule, in cases of valvular lesions giving rise to murmurs, whatever be their number, intensity, and quality, there is no danger, either immediate or near at hand, so long as the heart is not enlarged; for clinical observation shows that, in general, valvular lesions cause enlargement of the heart before leading to more remote effects, which involve distress and jeopardize life. Moreover, clinical observation shows that in most cases, enlargement of the heart is produced by valvular lesions slowly, the ulterior effects being, of course, proportionately distant. I would remark, in this connection, that in order to judge of the import of organic murmurs aside from enlargement of the heart, the heart-sounds claim more attention from stethoscopists than is usually given to them. It is certain that the aortic and the pulmonary-artery second sound can generally be interrogated separately by auscultation; and I believe this statement may also be made with respect to the mitral and the tricuspid valvular element of the first sound. The absence of any abnormal modifications of these several components of the two sounds of the heart is an important point in judging of the innocuousness of valvular lesions, the existence of which is revealed by the presence of murmur.

The difference in the tolerance of chronic affections of the heart is to be considered with reference to the prognosis. What is true of most chronic diseases—namely, that the same lesions are tolerated very differently in different cases, is especially exemplified by the structural affections of the heart. It is truly astonishing how well borne, in some cases, are cardiac lesions of unusual magnitude. A case which recently came under my observation afforded a striking illustration of this fact. The patient, a man of middle age, was suffering greatly from dyspnœa in paroxysms, together with loss of appetite and

general prostration, and the case ended fatally within a few weeks after the occurrence of the symptoms just named. I saw the patient a few days before his death, and found the heart enormously enlarged. The apex-beat was in the eighth intercostal space several inches without the linea mammalis; and the dullness on percussion over the præcordia was proportionately increased both in area and degree. Here was truly a *cor bovinum*. There were present murmurs, indicating both aortic and mitral lesions. There had occurred an attack of acute articular rheumatism fifteen years ago. Now, prior to a few weeks before his death, this patient had seemed to be in excellent health, and he declared that he was so. He was a man of very active habits, engaged in a business (that of a wool merchant in the country) which required much travelling. He had had on one occasion an attack of hemiplegia of very brief duration, which was probably attributable to embolism. With this exception he had not for many years been a patient, considering himself a healthy man. He was a man of temperate habits, but a good liver as regards diet, eating very heartily, and digesting his abundant meals without difficulty; yet it is certain that for several years there must have been very great enlargement of the heart, resulting from the valvular lesions. For some time before the occurrence of grave symptoms referable to the heart, he had done an unusual amount of mental and physical work, accompanied with much excitement; nervous æsthenia and impaired appetite ensued, and under these circumstances he began to suffer from dyspnœa. He was compelled to keep his bed; he became despondent; the existence of disease of the heart was forced upon his attention, and he failed rapidly. The history of this case represents what I have been repeatedly led to observe in other cases—to wit, the tolerance of disease of the heart, while it was advancing more or less slowly, until it had attained to a great amount, the person affected, in the meantime, not considering himself an invalid, taking no remedies, living freely, and engaged in pursuits involving activity of mind, or of body, or of both. The case also represents a fact

which I have repeatedly observed—namely, that from the time when persons with disease of the heart become patients, that is, when they become impressed with a knowledge of the existence of the disease, and are obliged to give up their usual pursuits and habits, they are apt to fail rapidly. It is a *facilis descensus* from that time. The latter fact, as well as the remarkable tolerance of the disease under the circumstances stated, teaches an instructive practical lesson.

In speaking now of the tolerance of cardiac lesions, I do not, of course, have any reference to those which have already been referred to as innocuous. I refer to lesions which are more or less serious—that is, involving either obstruction to the free passage of blood through the orifices of the heart, or regurgitation, or both of these immediate effects combined, together with enlargement by hypertrophy or dilatation separately or in combination.

All clinical observers who have seen much of diseases of the heart must have been struck with the fact, that the inconvenience and suffering attendant on lesions the same in character and extent, differ widely in different cases.

What are the circumstances on which this variation as regards tolerance depends? The question not only has a bearing on the prognosis, but it is of great importance in relation to management. I will devote to it a few remarks.

In general terms, chronic diseases of the heart, as of other organs, are tolerated in proportion as the functions of the body, exclusive of the part diseased, are healthfully performed. The internal conditions of general health and constitutional strength relate especially to the series of functions which begin with ingestion and end with nutrition. Other things being equal, the toleration is best and longest when, *first* of all, the ingesta are ample; *second*, when digestion is active; *third*, when, owing to adequate assimilation, the constituents of the blood are in normal proportion; *fourth*, when the nutritive supplies in the blood are well appropriated; and *lastly*, when the secretory and excretory organs do their proper work. Now, a healthful per-

formance of these functions is not incompatible with considerable damage of the central organ of the circulation; and in so far as it is practicable to maintain those functions at or near to the state of health, the toleration of disease of the heart will approximate to completeness. *Per contra*, the toleration will be incomplete in proportion as the functions of the body, exclusive of the heart, are feebly or imperfectly performed; in other words, in so far as the condition just named of general health and constitutional strength are deficient. The blood may be considered as representing the healthful performance, or otherwise, of the functions of nutritive and destructive assimilation; so that the simple phrase, *healthy blood*, comprehends the grand requirements for toleration."

In the discussion which followed Dr. Flint's paper, the following statistics, based on ninety *post mortem* examinations made in the Bellevue Hospital, New York, were brought forward by Dr. Alfred L. Loomis. They illustrate the question of how often and in what manner cardiac lesions are the direct cause of death:

It will be seen that valvular disease, cardiac hypertrophy, and dilatation, were present in fourteen cases. Of this number, heart lesions were the cause of death in seven; death was sudden in one, and was caused by stenosis of the mitral and tricuspid orifices.

In fifteen cases valvular lesions, with cardiac hypertrophy, were present, in eleven of which the heart lesions were the cause of death; in five of these death was sudden, and the valvular lesions were aortic in one, mitral in another, aortic and mitral in another, mitral and tricuspid in another, and mitral and pulmonic in another.

In six cases valvular lesions, with cardiac dilatation, were present. In four of these the heart lesions were the cause of death; two died suddenly, in one the valvular lesions were mitral stenosis and aortic thickening, in the other the aortic, mitral, and tricuspid valves were all diseased.

In forty-six cases valvular lesions were present without

cardiac hypertrophy or dilatation. In only two of these were heart lesions the cause of death, in neither of which was death sudden. Lesions of the coronary arteries were present in three cases; in one, death was sudden. Thrombi of the heart were present in six cases, death sudden in one.

It will also be seen that the number of deaths due directly to heart lesions was twenty-six. In nineteen cases death was sudden; number of sudden deaths due to heart lesions, ten; number of gradual deaths due to heart lesions, sixteen; number of deaths not due to heart lesions, sixty-four. Of the nine sudden deaths not due to heart lesion, four were from cerebral apoplexy, four from uræmic convulsions, and one from croupous laryngitis.—*Exchange.*

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ART. III.—THE SOCIAL EVIL PROBLEM—RESULT OF ENGLAND'S EXPERIMENT—REPORT OF THE ROYAL COMMISSION ON THE CONTAGIOUS DISEASES ACT—ALL PHASES OF THE QUESTION.

After a session of six months and the examination of eighty witnesses, the Royal Commission on the Contagious Diseases Acts have made their report. This document has not yet been presented to Parliament, and Mr. Bruce, in reply to a question last night, said that it would not be presented for a few days to come.. In this respect I am more fortunate than the members of the House, as I have before me a copy of the report. It is so interesting, and the subject on which it treats is so important, that I propose to prepare for you a full summary of its contents. Sooner or later the Legislature of every civilized country will be bound to take up the question of protecting its society from the spread of that dreadful disease which is the fruit of vice, but which often inflicts its worst punishment upon wholly innocent victims, and continues to poison the blood of successive generations. Legislation in England on this subject commenced in

1864, when a bill was enacted "for the prevention of contagious diseases at certain military and naval stations." The operation of this act was limited to eleven military stations and seaport towns, and by its authority provision was made for the surgical examination of women supposed to be infected for their detention in hospital, and for the punishment of brothel-keepers who harbored diseased women. From time to time this act was altered and enlarged in its provisions, the most important additions being the periodical examination by medical officers of every prostitute within these districts, either upon a magistrate's order or by voluntary submission, and the detention in hospital of every woman found diseased for a period not more than three months, the certificate of the surgeon being the only warrant necessary for this detention. The law seemed to work well; the health of the army and navy seemed to improve, and disease among the women appeared to become much less common. In 1870, under the authority of the amended and enlarged act of 1869, the public women in all the prescribed districts—which were now seventeen in number—were notified that they must appear for examination once a fortnight, and all the other provisions of the law began to be very stringently carried out. A very great power was placed in the hands of the police entrusted with the execution of the law; they were empowered to judge whether a person was or was not a prostitute. If they satisfied themselves that she was, they ordered her to appear for examination; if she refused, she was taken before a magistrate, and there obliged to prove that she was a virtuous and respectable person. It speaks highly for the wisdom, faithfulness, and care of the police, that in no case substantiated before the Commission, could it be proved that the police had made a mistake, and had summoned a virtuous girl to undergo the ordeal prescribed for her fallen sisters.

In 1870, an association composed of many persons of eminence and authority, was formed for the purpose of inducing Parliament to extend the operations of the law throughout the kingdom, and to embrace in its provisions all the fallen sister-

hood. Immediately afterwards, a counter association was formed, also consisting of many eminent persons, and embracing a large number of ladies and clergymen, for the purpose not only of resisting any extension of the acts, but of procuring their repeal *in toto*. The fight between these rival associations soon became very hot. The first urged that the welfare of society demanded that every possible measure for the eradication, mitigation, or reduction of disease, should be adopted; that, as small-pox had been greatly checked by vaccination, so venereal disease might be greatly checked by the means proposed; that it was the more important to do this because the taint of the worst form of these diseases was often transmitted from husband to wife, from mother to child, and even from a child to its nurse; and that moral reform would attend the physical means proposed, care being taken to surround the women sent to hospital with good influences, and to induce them, and aid them upon leaving hospital, to return to a life of respectability and virtue. The rival association took very high ground. It declared, first of all, that the law of God provided that suffering should follow sin; and that any legislaaion which tended to make sinning safe, was in violation of God's law. They advanced nine other objections to the acts, which may be thus stated.

The acts are designed to provide sound prostitutes for soldiers and sailors.

Such legislation, by rendering vice less hazardous, has a direct tendency to promote immorality.

The protected districts are resorted to by libertines, and married men and youths are induced to visit the registered women by the security thus offered against contagion.

The practice of registering women and subjecting them to periodical examination for the purpose of ascertaining whether they are in a fit condition to follow their trade, is an outrage upon public decency and morality.

The system is a recognition by the State of the trade of prostitution.

The compulsory examination of the women at stated intervals, removes any lingering sense of shame they may possess, and hardens them.

The increased gains, consequent on their improved condition tempt girls to enter on this way of life.

It is unfair to exempt men from the same regulations as those proposed to be imposed on women.

The acts are opposed to the constitutional principle of the liberty of the subject.

They also urged that should the acts be extended all over the kingdom, it would be impossible to prevent great injustice and hardship; any police officer could ruin the reputation of a workman's wife or daughter by accusing her of being a prostitute, and compelling her to come before a magistrate to prove her innocence; and that all mistakes of this kind which would be made, would be among the poorer classes, as the police would not arrest the dames of Belgravia, who rode in their broughams to meet their lovers, but confine their operations to the shop-girls going home late from work, or to the wives of workmen as they went out at night to pay visits, or do their shopping.

The zeal with which the opponents of the law—especially the lady opponents—prosecuted their campaign, was remarkable. They went to the various "protected districts"—which are Portsmouth, Devonport, Sheerness, Chatham, Woolwich, Aldershot, Windsor, Shorncliffe, Colchester, Greenwich, Winchester, Dover, Canterbury, Deal, Maidstone, Gravesend, and Southampton—and made friends with the prostitutes, bribed them to resist going to the examinations, got them to relate moving stories of the horror they experienced at this outrage upon them, and printed no end of pamphlets and tracts upon the subject, which they circulated through the post so freely that for a while fathers of families had to provide locked letter-boxes for the reception of their mail matter, in order to prevent their daughters from seeing and reading literature of this very peculiar character. Finally, the excitement grew so great that the Government took up the subject, and after a discussion in

the House of Commons, with closed doors, the Royal Commission, whose report I now have, was appointed "to inquire into and report upon the operations and administration of the Contagious Diseases Acts, and to suggest whether the same should be amended, mantained, extended, or repealed." The Commission consisted of twenty-three gentlemen, among them being Lord Hardinge, General Pakington, Professor Huxley, and Mr. Robert Applegarth.

The evidence taken by the Commission was extremely voluminous, and extremely interesting. It was proved in the first place, that there had been no cases of misconduct or negligence on the part of the police in executing the law. It was proved that, although improved treatment and more cleanly habits of the people have diminished the virulence of the disease, it is still one of the most formidable character. It was shown by the highest medical authority that certain diseases of the lungs, the liver and the spleen, are of syphilitic origin, and that many children are born subject to this disease. Still, some of the medical witnesses did not think that the evil was of such magnitude as to justify the interference of the State.

The medical witnesses were nearly unanimous in the opinion that the periodical and regular eximination of the women is essential to the system. In regard to the effect of the acts on the health of the soldiers and sailors, it was shown that in 1865 the cases of syphilis on the home stations of the navy were 108 in each 1,000 men. In 1866, under the partial operation of the acts, the ratio had fallen to 76 per 1,000; and in 1869, when the acts were in full operation, the cases were only 59 in 1,000. The figures in regard to the army were even more remarkable, the cases being reduced from 120 in 1865 to 86 in 1867, and to 54 in 1870. In 1866, out of 1,661 women examined, 1,103 were found diseased, and this fact shows how very great was the prevalence of the contagion which, in the same quarters, has now been nearly eradicated.

Another important fact is now dwelt upon by the Commission. In the protected districts, the number of prostitutes has been

reduced from 4,852 to 2,650. There was evidence to show that, to a small extent, "clandestine prostitution" has been substituted for "public solicitation," but even this is some gain to public decency, and there is no doubt that, without regard to this fact, a sensible diminution of women engaged in the traffic has been one of the results of the acts. What has become of those who have abandoned the business? The report shows that although the reclamation of the fallen women was not a part of the original design of the acts, it has become a part of the system. A chaplain is attached to each of the hospitals; the matrons are excellent women; the influences brought to bear on the poor and wretched women, some of whom are very young girls, have not been without happy effects. The inspector of Devonport testified that 90 per cent. of the women removed from the register in that district have ceased to be prostitutes. In 1866, there were 2,621 prostitutes in the Devonport district; there are now only 557.

Again, the Commission says that the acts produce a deterrent effect. "They operate," says Mr. Superintendent Wakeford, "to prevent an accession of fresh women from the ranks of the respectable in the district, or from other districts, into the number of the positively immoral. Women going to brothels for the first time, and being met there by the police—very often very young and inexperienced girls—there is an opportunity afforded of their being cautioned as to the nature of the place they are in, and the consequences which will attend it, and of their being advised to return to the situations which perhaps they have left, or to the places from which they have come, and of the consequences if they remain there, which has a great deterring effect with regard to keeping the ranks of prostitutes from being recruited." Mr. Woolferstan, a surgeon some time engaged in the administration of the acts, and not favorable to them in their present form, distinctly stated "that the acts had a deterrent effect in keeping women from becoming common prostitutes." Not only young girls, but married women, seamstresses, and others were restrained from indulging in occasional

license, by fear of the acts. The superintendent of the local police at Plymouth admitted that the acts had reduced the number of public women, and that they had a deterrent effect. Inspector Annis, of the Devonport District, stated that the effect of the reduction of the public women from about 2,000 (every one of whom had registered by name) to less than 600, involved the total disappearance from the brothels and the streets of some two or three hundred children of from thirteen to fifteen years of age.

The Commissioners now go on to say, that after carefully balancing the arguments on both sides of the question as to whether good or evil most results from the enforcement of the acts as they now exist, and as to whether good or evil would result from their extension all over the kingdom, they arrive at the conclusions:

1st. That the periodical examination of the women be discontinued.

2d. That a woman once found diseased shall be detained in hospital until discharged cured.

3d. That the acts may be extended to any place in the kingdom, except London and Westminster, from which a request for such extension shall be made.

4th. That girls under sixteen, acting as prostitutes, be sent to a reformatory for two years.

This report is signed by all the twenty-three members of the Commission. But seven members append a statement of their reasons for dissenting from this compromise, and for advocating the extension of the acts over the whole kingdom. They say:

We proceed to recapitulate the good moral effects which these calumniated acts have produced, and which, in our opinion, far outweigh any moral objections which have been or can be alleged against them.

A. Religious and moral influence has been brought to bear upon large numbers of women, a great portion of whom had been from infancy familiar only with scenes of debauchery and vice.

B. Towns and camps have been cleared, or nearly so, of the

miserable creatures who were formerly to be found in their streets and thoroughfares.

C. A considerable number of abandoned women have been reclaimed and restored to respectable life, and in many instances married.

D. The number of loose women has been greatly reduced, and those who remain have been rendered more decent and decorous in appearance and conduct.

E. The practice of clandestine prostitution, which too often degenerates into professional vice, has been materially checked by fear of the consequences of such indulgence which are rendered probable under these acts.

F. The sad spectacle of juvenile prostitutes of tender age, so rife in such localities heretofore, has been greatly diminished, in some instances almost removed.

G. The temptations by which young men of all classes have been hitherto assailed, have been, to a great extent, taken out of their way, and morality has been thus promoted.

When we turn to the probable moral effects upon the women themselves of the periodical examinations which are so much objected to, we must contend that any disadvantages which may have attended them are more than counterbalanced by their good moral and physical results.

It should also be borne in mind with respect to this, perhaps the most difficult part of the subject, that every woman who feels aggrieved by periodical examination, has it in her power to emancipate herself from such a consequence of her mode of life.

Entertaining these opinions, we cannot consent to make ourselves parties to a view of this most important question, which, in our judgment, falls short of the truth, the sound policy, and the necessity of the case.— *World.*

## ANALYTICAL DEPARTMENT.

**"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.**

ART. I.—ANALYSIS OF VARIOUS ARTICLES. Published in the "Medical Times and Gazette," the "British Medical Journal," and the "London Lancet," etc. (Original copies). By Prof. JAMES M. HOLLOWAY, M. D.

*Skim-Milk Treatment of Diabetes.*—Dr. A. S. Donkin, in the

"Lancet," May 6th, 1871, reports two cases of *diabetes mellitus* successfully treated by skim-milk exclusively after other approved methods had failed. One of the patients, a man aged fifty-eight. For two years he had been suffering from the symptoms of the disease. On the 14th of June, 1870, a careful investigation of the case by M. Francis, surgeon, and himself, revealed the nature of the disease. At that time from eight to ten pints of urine were passed daily—specific gravity 1035.40, and loaded with sugar. Being a stout, muscular man, and having a sharp appetite, he was allowed from eight to ten pints of milk daily, from which the cream had been carefully removed. At the end of fourteen days, all traces of sugar had disappeared from the urine, together with an amelioration of all the symptoms. This treatment was continued for five weeks, after which a portion of the milk was converted into curd. At the end of seven weeks, in addition to the milk, a little beef or mutton, and green vegetables were taken, the patient being under close observation all the while. Seven months after the treatment was begun, the patient was in robust health, all traces of the disease having left him.

In the other case, which was not so chronic, the sugar disappeared in twelve days after the skim-milk treatment was resorted to. He was allowed six pints daily, abstaining from all other food. Seven months afterwards the health of the patient was perfect.

*Removal of Patella for Dislocation of Sixteen Years' Standing.* The patient, a woman aged twenty-eight years, had suffered more or less severely from pain about the knee since the dislocation of the patella, sixteen years previous; when able to go about she required the aid of two crutches. Had been treated by a number of physicians, without relief, by rest, blisters, setons, bandaging, etc. When Surgeon Robert S. Fowler took charge of the case, the patella was found over the external condyle; the trochlea filled up; and, although the bone was moveable, it could not be returned to its normal position.

In opposition to the surgeons who were present at the

consultation, Surgeon Fowler attempted to detach the bone by subcutaneous incisions. His tenotome was too short, and by using a larger and broader knife, he found that the opening through the skin was too large, whereupon he made a bold incision over the bone and removed it. When the sutures that closed this wound were removed, deep union of the soft parts had been effected, and in a short time the remainder had healed by granulation. For two months the limb was kept at rest.

June 1st, four months after operation, she left the infirmary with a starch bandage around the knee. She has been free from pain; has improved in health and strength, and is able to walk without the aid of a crutch. Thirteen months afterwards, she still wears a splint of undressed leather upon the ham, a flexion of the knee beyond a certain degree cannot be borne. She has resumed her ordinary avocations, and is able to walk miles without assistance.

*Therapeutic Value of Iodine in the Treatment of Syphilis.*—Mr. James R. Lane, of the Female Lock Hospital, attaches but little value to the various preparations of iodine in the treatment of primary and so-called secondary syphilis. Mercury is regarded by him as the most potent agent; administered in the way that is best tolerated by each individual case, all the symptoms yield to its unaided action. In the tertiary forms of the disease, however, iodine proves an extremely valuable agent. The tertiary symptoms will return and return again; for it is not possible to correct so confirmed a diathesis in a few weeks. The iodine, however, does not cease to exert a controlling, if not a curative effect, and the fact of the recurrence of the disease is not an indication of the failure of the remedy.

The experience of a large number of the Profession in America suggests the combination of iodine with mercury in all stages of the disease, either in the form of the proto-iodid hydrg. or the bichloride of mercury in combination with iodide of potassium.

In a few cases experience teaches that mercury alone is not

tolerated, and that iodine alone is not effective; but that by combining the two with tonics, nourishing diet, and a healthy locality, the most unpromising cases will at length yield, and be permanently cured.

The failure of remedies, judiciously prescribed, is more often due to the habits of the patient than to their inefficiency.

*The Ecraseur for the Removal of Nœvoid Growths.*—James F. West, F. R. C. S., Birmingham, in the "Lancet" for March 4, 1871, after discussing the comparative merit of the various means for the removal of erectile tumors—viz., the ligature, the chloride of zinc paste, the injection of per-chloride of iron, hot needles, the knife, vaccination (he does not mention electrolysis), decides in favor of the écraseur for the majority of cases, because: 1st. Hæmorrhage is avoided; 2d. You have resulting a linear cicatrix, and a comparatively small wound. Chassaignac, who introduced the method, also claims for it that less inflammatory action is induced, less suppuration, and a diminution of the risk of pyæmia.

When the écraseur is employed the operation is facilitated, and the size of the wound rendered less by incising the skin around the tumor before the chain is applied. The contraction should be slow and gradual, the patient being anæsthetized.

*A Case of Tetanus Treated Successfully by Chloral Hydrate.* The patient, a lady, had been suffering for two years with myelitis, leaving her with partial disuse of the lower extremities. One day, after a ride, her nurse let her fall into the sitting position. After a sleepless night her jaws became rigid, soon followed by tonic spasms of the muscles of the back and legs (no mention is made of the condition of the arms and the anterior muscles of the trunk). The chloral hydrate was administered in repeated doses, its first effects being to induce a glow all over the body, then to slightly relax the spasms, and afterwards to induce refreshing sleep. In twenty-four hours the spasms were all gone.

The patient is reported as having improved rapidly until

January 3d, four days after, when, in making up the bed, the nurse wrenched the patient's back; whereupon all the former symptoms returned. The chloral was again employed, and "after the second dose the *tonic tetanic spasms* entirely subsided." (?)

*Query.*—From the history of the case and its treatment, would it not be a fair presumption that both attacks were nothing more than *tetanic spasms*, which are, as a rule, recovered from under almost any plan of treatment? No case of genuine tetanus ever behaved in the manner detailed by Dr. A. G. Lawrence, of Chepstow, of which the above is a summary.

*Nitrate of Silver in Painful Swelling of the Joints in Rheumatic Gout.*—Dr. Walter Furgus, of Marlborough, in a letter to the "Lancet," March 25th, 1871, gives the history of a man, aged twenty-six years, who had been and was still suffering intense agony, chiefly in the knees and ankles. The illness had been a tedious one. Nitrate of silver was applied freely to the whole surface of the joints by means of the stick-caustic. In less than two hours the pain was sensibly lessened, in twelve hours it had so far subsided that the joints, that previously could not bear the weight of the bed-clothing, were freely moveable without distress. The cuticle was removed by the application, and where the caustic had taken full effect, the pain never reäppeared.

*Pirogoff's versus Symes's and Chopart's Amputation.*—Samuel Craddock, coroner for North Somerset, in a letter to the "Lancet," March 25th, 1871, calls attention to the fact that Mr. Henry Smith, at a meeting of the "Medical Society of London," had expressed his preference for Pirogoff's amputation over that of Symes's. Hitherto Mr. Craddock thought that he was alone in his opinion as to the greater value of the former operation. He maintains that Pirogoff's is not only preferable to Symes's, but also to Chopart's method. His arguments in favor of the first named are: 1st. There is very little shortening; 2nd. The uninjured end of the back of the *os calcis* is better for

the body to rest upon and bear its weight than the cut and necessarily mutilated ends of the tibia and fibula, such as you meet with in cases of Symes's amputation."

Surgeon Otis, of Washington, is the chairman of a committee which will probably report upon the comparative advantages of these three operations at the next meeting of the American Medical Association. The analyst would suggest, in anticipation of this report, that there have been in his experience, two great objections to Pirogoff's amputation:

1st. The difficulty in so adjusting the tuberosity of the calcis to the sawn end of the tibia as to secure firm bony union.

2nd. The contraction of the muscles of the calf, acting through the tendo-achilles upon the calcis, not being any longer opposed by the anterior muscles of the leg, almost in every case causes the cicatrix to be too dependent. In an article published in the "American Journal of Medical Science," for 1865, the analyst called attention to these objections, and cited illustrative cases that had been carefully examined by him, with a view of deciding upon the best method for operating upon the ankle-joint and adjacent parts.

*Ipecac in Dysentery.*—The employment of this drug in the treatment of dysentery finds an enthusiastic advocate in Dr. W. C. Maclean, of the Royal Victoria Hospital, Netley. In a letter to the "Lancet" he condemns, in positive terms, the plan of treatment pursued by Dr. Wibel and others at the Bavarian Field Hospital, near Nancy, during the late war—viz., opium, tannic acid, morphia, calomel, and various methods for allaying pain.

He asserts that ipecac has met with unequivocal success in India, as shown by the statistics of the British army.

There is no period of the disease, nor special condition of the patient, contra-indicating its employment. Even when a patient has been much reduced by days of illness, frequent stools, and the agonizing pain of tormina and tenesmus, it will be safe to give the remedy in full doses—in scruple and half-drachm doses.

The above accords with the experience of those physicians in this city and elsewhere in this State who have given ipecac boldly in the malarial dysentery that occurs in the Spring, Summer, and Fall in every miasmatic region.

The use of calomel, which was once so general, proves to be, in the majority of cases, really damaging.

Milk diet is accepted by Dr. Maclean as the best; and the analyst would add, that buttermilk recently churned and given in definite quantities at regular intervals will, almost without exception, prove a grateful and sustaining diet.

Dr. I. S. Warren, lately a resident graduate, furnishes the following as the mode of administering ipecac in dysentery in the Louisville City Marine Hospital, Louisville, Ky.:

Apply a large mustard plaster over the epigastrum, and let it remain until it begins to burn, then begin with half-drachm doses, to be given every half hour, either in a bolus or the dry powder; the patient allowed just enough water to wash it down. Four doses are generally enough to effect a cure. This was the mode in which the acute cases were treated. In chronic cases, we had good effects from the following prescription:

Vin. Ipecac;
Tr. Nux. Vom., aa., ℥ij. M.

Sig.—Twenty drops three times, daily, either before or after meals, as it best agrees with the patient. One patient, who had taken everything that is usually given in dysentery, was completely cured by the ipecac and tr. nux. vom.

The effect of the remedy is to produce temporary catharsis, which can easily be controlled.

*Principles of the Antiseptic Treatment of Wounds.*—In the "Medical Times and Gazette," April 29th, 1871, Dr. A. E. Sanson, of London, after thoroughly discussing the potency of the various influences which tend to retard the quick healing of wounds, with little suppuration or without suppuration—viz., atmospheric air, moisture, foreign substances, and the putrefaction of retained extravasated blood, thus defines the basis of the antiseptic treatment of wounds:

A. Suppuration is an unmitigated evil; it is in no sense necessary for the healing of wounds. It is injurious, first, to the individual—directly by withdrawing force, which, under normal conditions, is subservient to the nutritive needs of the organism; indirectly, by its liability to decompose and give rise to an infectious disease, producing material which may be reäbsorbed; second, to the community by being capable of conversion into the transmissible poison of spreading disease.

B. Whilst irritation of sufficient intensity can induce suppuration in the case of external wounds, putrefaction is the chief; and anything which prevents putrefaction in an open wound, tends to prevent suppuration.

C. The object of the antiseptic system is to prevent putrefaction, and thus to prevent the evils which flow from it.

*Vaccination and Syphilis.*—At a meeting of the Royal Medico-Chirurgical Society, in April, 1871, Mr. Johnathan Hutchinson read a highly interesting report of eleven cases of vaccination, nine of which were followed by syphilis. A respectable surgeon obtained from a public vaccine institution an apparently healthy child to serve as vaccinifer. Eleven persons in one business-house, chiefly young adults, were vaccinated from the pustules on this child. Ten of these went regularly through the stages of vaccination, the scabs falling in two weeks. After the lapse of two weeks more the cicatrices became "indurated, round with a thin glutinous discharge, speedily passing into fungous buttons." The following summary will better explain the result in these cases:

| | |
|---|---|
| Vaccine without syphilis . . . . . | 2 |
| Syphilis without vaccine . . . . . | 1 |
| Vaccine with syphilis . . . . . | 8 |
| | 11 |

Mr. Simon, who had already reported adversely to this as medical officer of the Privy Council, was present, and admitted that Mr. Hutchinson had proved his cases; but showed, and in some degree satisfactorily, that on fair grounds of evi-

dence, he had no right to assume it as proved that syphilis could be given by vaccination; for he showed that full and free inquiries amongst English practitioners was so conclusive as to the negative, that he had no right to put into the scale the effect "of what purported to be vaccination" in the other countries.

*Digitalis as a Topical Remedy.*—At a meeting of the Clinical Society of London, April 14th, 1871, Dr. Buzzard read a paper on the subject named above. He and Dr. Fairbank had found a decoction of the dried leaves, a teaspoonful to a pint of boiling water, or a drachm of the tincture in place of the leaves, very successful in inflammation of the knee and elbow-joints, and also in acute inflammation of the breast. Flannels should be wrung out in the decoction, and applied to the inflamed part.

*Electrolysis in Encephaloid Cancer of the Femur.*—At the same meeting of the Clinical Society of London, Dr. Buzzard submitted a paper, by Mr. Lawson Fait, setting forth the prompt action of electrolysis in relieving the severe and agonizing pain always present in this disease. The patient, a female, aged thirty years, had taken, hypodermically, morphia in quantities of 20 to 24 grains; had taken larger doses of chloral, and had, moreover, taken both of these combined without inducing freedom from pain. Ultimately six needles were inserted into the tumor, under chloroform, and the electrical current applied for ten minutes. Three days afterwards, the needles were again inserted, and the current applied for fifteen minutes, with the result of giving the patient great immunity from pain.

Dr. Althaus had treated fourteen malignant tumors by this method, two of which were benefited; the others were negative, but in all the cases the pain was subdued.

No mention is made of the destruction of the tumors, nor of their diminution under the influence of this remedy.

A post-pharyngeal tumor, in a lady aged about forty years, under the care of Dr. F. C. Wilson, of this city, was very rapidly reduced by electrolysis. Whether it was entirely destroyed or not, the writer is unable to state, having lost sight of the case.

Dr. Julius Althaus, in the "Medical Times and Gazette," April 8th, 1871, reports a case of nasal and pharyngeal polypus (fibrous) treated successfully by electrolysis. It was not deemed safe to remove the polypus by incision, and the remedy was employed for months before all traces of the tumor had disappeared.

This remedy would, in the opinion of the analyst, prove valuable in the treatment of large *venous nævi* situated in localities that would prevent the employment of the écraseur, or other more common means; for instance, those occupying the sub-maxillary and sub-aural regions.

## CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

### ART. I.—FOREIGN BODY IN THE AIR-PASSAGES. By E. O. GUERRANT, M. D., Mount Sterling, Ky.

Kenney Prewitt, aged eighteen months, while playing with a kitten in the kitchen, by himself, on Monday morning, 26th of June last, suddenly gave a loud, piercing scream. The cook running in immediately, found him, choking, standing on the floor, holding the kitten with one hand, and the other over his mouth. Putting her finger in his mouth, she felt some hard body, but could not remove it. His mother soon came, and turning his head down, tried to dislodge the body from his throat. Failing in this, and seeing the necessity of doing something to relieve her strangling child, she first ran around the yard with him in her arms, and then holding him, put her finger into his throat, and felt what she supposed to be a marble.

He had been playing with a marble that morning, which

strengthened her impression of the nature of the obstacle. As she could not get it up, she pushed it down an inch or two, as she thought. Immediately the worst symptoms of suffocation subsided, and he was able to make a suppressed cry.

During this time his face had become dark, and he threw up a quantity of blood and frothy spittle. After his mother had pushed the marble down, he appeared to breathe better, but his face and neck became swollen immediately, and the veins and muscles of his neck all appeared enlarged. Every few minutes he made an effort to vomit, as if strangled. He attempted to cry during the time, but the cry was smothered and distant. After the body was pushed down his cry became more natural and clear. His parents started immediately to town with him, some six miles distant, and drove very rapidly. At about 9 o'clock, A. M., I saw him for the first time. The child had gone to sleep in the buggy, but awoke, crying, when it stopped. His eyelids, face, and neck were very much swollen (emphysematous), and gave that peculiar, crackling sensation to the touch, so characteristic of the presence of air in the cellular tissue. His countenance was anxious, his color purplish, his cervical veins turgid, and his breathing labored. I could recognize no change in his voice. From his mouth was running a bloody, sero-mucous fluid.

I exposed the pharynx with my finger, but could find no foreign body. I then gave an emetic of ipecac and warm water, but the child could swallow but little, and that with great difficulty To assure myself that the marble was not in the œsophagus, I then passed the largest-sized bougie down the œsophagus almost down to the stomach, but met with no obstruction.

In the meantime Dr. Hannah was sent for. He came and examined the child; was not certain that he had swallowed a marble; and if so, did not believe it had gone into the air-passages, and was opposed to the operation which I consider necessary. Dr. Hannah desiring more counsel, Dr. Drake was called in. After examination of the case, its history, symptoms, etc., he coincided with Dr. Hannah, and felt confident the marble

would pass off by the bowels, and the child be thus entirely relieved.

At his suggestion, the effect of position was tried. The child was made fast to a plank, and inverted at about seventy-five or eighty degrees, and compression and percussion of his chest tried, in vain, to expel the foreign body. In consultation it was agreed to postpone any other effort for extraction until evening, against which I protested, as diminishing the child's chances of recovery, and leaving it in continued danger of suffocation from obstruction or spasm of the glottis. The older physicians argued that the substance had most probably passed into the stomach, and that even if it was in the air-passages, he would likely stand as good a chance of recovery without an operation as with it, against which opinion I also firmly protested. In the meantime Dr. Kenney was sent for. During the day the child slept, or seemed to sleep, most of the time. His pulse gradually increased from 120 to 160 per minute. He was singularly free from cough, only occasionally giving a short, hacking expiration. Though his respirations were never hurried much, they were generally labored and painful. From 2 to 5 P. M. I discovered by the stethoscope that there was almost total obstruction to the entrance of air into the right lung, and expressed my belief that the marble was located in the *right bronchus*. The respiration of the left lung was correspondingly exaggerated. The child also complained of pain in his right lung, and kept his left hand pressed tightly over the right bronchus, sometimes gouging his little fingers into the flesh over that portion of the air-passage. He was continually restless when awake, tossing himself as if in pain and distress. His fever gradually rose during the day until he was burning from head to foot, but was restless under any cooling application.

Drs. Drake and Hannah returned in the evening, and after renewed examinations, seemed each confirmed in his opinion, as was I, though these opinions were diametrically opposite. They decided to postpone any surgical interference that might be

necessary until morning, as Dr. Kenney would not probably arrive until night.

About 9 A. M. Dr. Kenney arrived. He examined the patient critically during the night and next morning, and came to the conclusion reached by Drs. Drake and Hannah, that there was no foreign body in the air-passages, though expressing some doubt on the real nature of the trouble.

This (Tuesday) morning, in consultation, it was agreed upon to give a dose of calomel to act on his bowels, which have not moved since yesterday morning. About 7½ A. M. he had four or five grains given him. He rested well in the fore part of last night, but at 1 A. M. his face became congested, and his symptoms aroused the fears of Mrs. H., who was waiting on him, and she called the Doctor to examine him. His pulse had risen to 180 per minute; his skin was hot, and he was very restless, and continued tossing himself about in bed until day. Auscultation revealed more air entering the right lung, but accompanied by loud mucous räles, and moaning along the right bronchus.

During Tuesday he seemed more restless, only sleeping a few minutes at a time, and calling continually for water. His pulse fluctuated from 135 to 179, at night becoming faster and sharper. His tongue assumed a whitish, heavy coat. He drank some milk occasionally, and a little arrow-root and slippery-elm water, but manifested a decided preference for plain ice-water.

At 11½ a teaspoonful of castor oil was given him, and at 4 P. M., his bowels not having moved, he was given an enema of warm salt-water, which was followed by a large, healthy operation from his bowels, but there was no marble. From 8 to 9 P. M. his bowels were moved three more times—thin, bilious evacuations; but there was no marble. During and after these operations he became very sick at the stomach, and tried to vomit.

During the evening the doctors all visited and examined him again (except Dr. Kenney, who had returned home), and were

of the same opinion still, two seeming satisfied with his progress; the third adhering to his unfavorable opinion. During this day there was applied a warm, wet flannel cloth over the throat and chest as recommended by the physicians. The swelling of his face and neck appears to be subsiding. His countenance, which, all day, has been of a peculiar purple hue, became more natural towards evening. His strength and flesh appear to be failing, and he cries to be continually carried about or petted.

Wednesday morning, 1:30 A. M., his pulse is 155; breathing very labored, and cooing, groaning respiration in right bronchus, especially in expiration. He is very restless, turning in his cradle, and throwing his hands and feet about, refusing to be covered or to allow the warm cloth to remain over his chest. Mrs. P. had observed during the night that he *would not sleep on his left side*, and that when he lay on that side his breathing was so loud and labored that it could be heard on the porch; but when he lay on his right side his breathing was much better.

At 6 A. M. most of the unfavorable symptoms had disappeared. The emphysema had almost all gone; the respiration of both lungs appeared good, and very much alike, perhaps a little exaggerated in both; but the respiration is much louder in the lower than upper part of the trachea, rather indicating the removal of the marble from below upwards. His pulse is 132 and soft, while sleeping. He was considered well enough this morning to be removed to his grandfather's, some four miles distant. He swallows better to-day, and is fed on milk and slippery-elm water and ice-water, which he takes more freely and easily. All are in good spirits over his early-expected and predicted recovery. Only one unfavorable diagnosis remains to mar the most perfect assurance of his welfare. His bowels moved again about midnight; but still there was no marble passed. He did not appear any worse from his ride in the carriage, and slept well this morning. In the evening was restless and fretful. Has not much or any fever; pulse 126,

soft and regular; respirations natural in rythm and number; could detect no murmurs or räles.

Thursday 29th, Dr. Hannah alone visited him; pulse about 128; symptoms better; sleeps well. Doctor is confident no foreign body entered his air-tubes. Thinks likely a peice of meat, or bread, or something of the kind choked him, and afterwards passed down into his stomach, and was digested. Bowels moved several times last night, but no marble or other foreign body passed.

Friday, 30th, I visited the child this morning. At 10 A. M. pulse 128 while asleep, 132 when awake. Respiration labored; loud räles over right lung; soft murmuring over left. Child looks distressed; throat swollen again and hard. Bowels moved twice last night, and no foreign body seen. One of the operations was colored reddish, like brick-dust. The negro cook is now suspected by some of poisoning or otherwise injuring the child. Unfortunately she has a bad record. The child cries more hoarsely to-day, or as Mrs. B. remarked, "as if something was in his throat." He frequently puts his hands up to his neck and throat. Has some fever this morning, and has more cough, with considerable mucous expectoration, which frequently comes up voluntarily.

Friday evening the child grew worse; his symptoms exciting the fears of the family; and they sent for Dr. Hannah. He visited him again on Saturday and Sunday. He seems sometimes better, sometimes worse. Dr. Hannah thinks he gets along very well, except the swelling in his throat. Pulse about 120. Dr. Hannah visited him again Monday evening; symptoms about the same. Tuesday morning he visited him again; don't think him so well; does not like the diphtheritic swelling in his throat. Breathes croupy, with considerable expectoration of mucus. Tongue coated white; is restless at night, turning from side to side. Breathing labored; has to be watched and waited upon day and night.

On Tuesday night the child becoming worse, Dr. Hannah was sent for again. Remained all night, and returned home in

the morning; expresses the fear that the child will die. Breathes as though he had a cord tied around his neck. After he had left, Dr. Cunningham, the family physician of Mrs. P., called in. Finding the child in great distress and danger, he sent immediately for Dr. Hannah and myself. Neither being found, Dr. Buford was brought. Drs. Buford and Cunningham examined the child, and were rather of the opinion that the large swellings on either side of the trachea were abscesses, obstructing respiration by external pressure on the wind-pipe. They explored the swelling, but found only blood and serum.

About 12 M., Dr. Hannah and myself arrived. The child was laboring for breath, exactly as if choking, either by obstruction within or compression without the windpipe. His neck had one large swelling on each side of the trachea, the one on the right being the larger. The swellings were red, soft, and puffy, and felt as if containing pus. He had the stridulous, hoarse cough of croup, and its smothered cry; but he coughed very seldom. The respiration in both lungs was about the same; hardly any vesicular murmur could be detected; only bronchial respiration and loud mucous räles over both. He swallowed with great difficulty, almost strangling at a few drops of water. His tongue is coated white. Intellect clear, and he is still very intelligent; bowels move regularly; can eat nothing on account of the difficulty of swallowing. He can sleep but a few minutes at a time, as his distress wakes him up, and he turns continually from side to side. His condition is truly pitiable, and excites the deepest commiseration.

After their examinations, the four doctors held a long consultation. Drs. Buford and Hannah were not satisfied that there was any foreign body in the air-passages, and therefore would not advise an operation; but recommended iodide of potassium internally, and tinct. iodine externally, with the suggestion that an operation be performed when it became absolutely necessary. Dr. Cunningham and myself were of the opposite opinion that there was a foreign body in the air-passages, and considered an operation for its extraction the only hope there was for life, and *that* hope a very feeble one at this late day.

The doctors being equally divided, the male members of the family were called up, and each physician gave his opinion as to what was best to be done. The grandfather, father, two or three uncles, etc., were present. After hearing these various opinions, they protested their inability to decide as to what was best to be done, but were inclined to believe that it was too late to do anything now to save the child, in which opinion the physicians generally concurred. Under these circumstances the father of the child decided not to subject him to the pain of an operation now, when, in all human probability, it would do no good.

In this all the physicians acquiesced. At the request of Mr. P., I remained with the child. During the evening and night his symptoms grew worse; the difficulty of breathing increased, until it was a continued death-struggle, with his head thrown back as in opisthotonos, his nostrils dilated, his mouth open, his chest expanded, the soft parts of the thorax depressed, his eyes wild, and his whole countenance expressive of the utmost distress. His pulse was sometimes good at 120, with hands and feet warm. In a few minutes the pulse would run up to 150, then flicker and entirely disappear from the wrist, and his feet and hands grow deathly cold. Occasionaly the phlegm would accumulate in his windpipe until he would choke, and then a terrible struggle for breath would relieve him temporarily. He would sometimes manage to get up a little of the white, thick, tenacious mucus, which was swallowed or wiped away. This fiery ordeal was continued all through Wednesday night, during which he appeared to be dying several times, but he held out heroically struggling against fate until Thursday morning.

Drs. Cunningham and Hannah returned this morning, and examined him, but suggested nothing more, as he could swallow nothing, and was fast approaching the last struggle. His pulse gradually grew feebler, and his strength failed hour by hour, as inch by inch he resisted death, until at 11 A. M., 6th July, after a long and terrible struggle, his lungs heaved for the last

time. His heart continued to beat for a minute or two after he ceased to breathe, and his feet and hands were as warm as in life.

No one ever witnessed greater suffering or greater fortitude in supporting it.

*Post Mortem Examination.*—Dr. Cunningham being sent for, came by 2 P. M., and in the presence of Drs. Thompson, Guerrant, Sr., A. Prewitt, W. Prewitt, R. Nelson, and myself, proceeded to make a post mortem examination, with the consent of the family.

Opening the windpipe as in tracheotomy, he found it filled with tough mucus and a quantity of pus; a large quantity of pus also escaped from the abscesses on either side of the trachea. Inserting a long silver probe, he explored the upper portion of the windpipe, trachea, etc., but found no foreign body. Bending the probe and turning it down, he passed it into the right bronchus, where it was stopped by some hard substance, upon which it clicked with a metallic sound. A number of the assistants felt it, to assure themselves of its presence and character. All could hear the probe distinctly strike it when pushed into the right bronchus.

Dr. Cunningham having only a very short pair of dissecting forceps, was unable to extract the body from the opening he had made in the upper part of the trachea; so with his scalpel he disarticulated the ribs from the sternum, and raising this up, put his finger into the right bronchus, and lifted out of it a white, alabaster marble eleven-sixteenths of an inch in diameter. It had ulcerated the tube away from around it, and lay in a cavity larger in diameter than itself, filled with mucus and pus. The surrounding portion of the lung was firmly attached to the thorax by pleuritic inflammation. Externally neither lung exhibited any signs of inflammation; and but for the mucus and pus which accumulated in his trachea, and then smothered him, his life and sufferings might have been considerably prolonged.

As the family requested that his person be not mutilated or disfigured more than was necessary to discover and extract the foreign body, no further examination was made.

ART. II.—A NEW AND EASY MODE OF TREATING STRANGULATED HERNIA, WITH REPORT OF TWO CASES. By DAVID CUMMINS, M. D., and DOUGLAS MORTON, M. D., Louisville, Ky. Reported by Dr. MORTON.

This new and easy mode is simply to introduce a canula-needle into the hernial tumor, and evacuate such of its contents as can be made to pass through such a channel.

The first of the cases I propose to report occurred in the practice of Dr. D. Cummins, of this city, in November, 1869. It was of a large and tense scrotal hernia, and the patient a negro boy. The instrument employed by Dr. Cummins was a hollow needle, made for applying sutures in vesico-vaginal fistula. Immediately on introducing this instrument, the gas, which distended the bowel, gushed out, relaxing the walls of the loop, and rendering reduction a matter of the utmost ease. The patient was up on the next day, and suffered no bad results from the operation.

The other case referred to, I saw on Sunday night, July 2d, with Dr. R. H. Isham, of Preston street.

Patient was a workman in a chair factory, about thirty years old, and the subject of an old inguinal hernia, for which he had been wearing a truss. On retiring Sunday night he took his truss off, and a short time afterwards was seized with a paroxysm of coughing, during which a loop of intestine was forced down into the scrotum, forming a very large and tightly distended hernial tumor. About three hours after this occurrence I saw him. Taxis had been tried some time, without avail, and I did not think it justifiable to continue pushing, a means which I believe is always attended with great danger to the patient. I therefore resorted to the evacuation method, in which I have much confidence. I used the nozzle of a hypodermic syringe—one entirely too small, but the best I could get under the circumstances. With this I removed a quantity of the flatus, and by means of the syringe, pumped away some of the liquid contents of the tumor. The process, however, was so slow with the very small canula I had, which frequently became clogged

with solid particles suspended in the liquid, I was unwilling to subject patient to the dangers of delay, and concluded the safest plan would be to have the stricture divided, and with a view to this, went out to get Dr. Holloway to perform the operation. Dr. Isham continued to give chloroform, keeping the patient slighly under its influence, in order to lull his suffering.

Dr. H. and I arrived in about an hour, and were pleased to find that the bowel had been released; it had spontaneously relaxed, and was readily reduced by Dr. Isham. Patient is now well, July 6th.

In regard to the latter case, I am not at all certain as to what extent I ought to credit the canula-needle for its favorable termination; and will claim no more than to have made a step toward removing an objection which exists in the minds of some—namely, the fear of exciting peritonitis.

I will now consider the operation in three aspects. First, as regards danger attending it; second, cases in which it is included; and third, when it should be performed.

1st. By some means, it is not easy to say what, the mind of the Profession generally has received a most exaggerated impression of the liability of the peritoneum to inflammatory action. Indeed, it has been accepted as a well-established fact, that the peritoneum can be subjected to no sort of violence without *great* danger of peritonitis. This notion has so biased the minds of medical men as to render them unable properly to interpret facts bearing intimately upon the question, which, from time to time, have forced themselves upon their observation. In the light, however, of the wonderfully favorable results of ovariotomy, and of other great operations involving the peritoneum, the extreme susceptibility of the peritoneum to inflammation has lately turned out to be a myth. The danger, then, attending so small a matter as the perforation of the peritoneum with a good-sized needle, viewed in general, appears to amount to almost nothing. But the fact that, in perforating a hernia, the wound in the peritoneum is made *subcutaneously*, and not

at all exposed to contact with air, is a strong special reason why peritonitis should not be apprehended.

It has been objected that very minute perforations of the bowel occurring in enteric fever have been the cause of death, by admitting of extravasation, and that this danger would attend perforation by a needle. I would reply to this, that in the former case the opening in the bowel is caused by destruction of tissue, and that there is no reason why it should not remain sufficiently patent to allow extravasation; while in the latter the tissues are merely displaced by the penetrating instrument, and will return as soon as it is withdrawn, completely closing up the opening. This appears especially true of the muscular tissue enveloping the bowel. The danger then attending the operation seems unworthy of consideration.

2d. In what cases is the operation indicated? In conversation with Dr. Cummins on this subject, who, as far as I have learned positively, first treated hernia with a hollow needle;* that gentleman said he had long ago noticed that in those cases where an old inguinal hernia became strangulated, the occasion was always in connection with disturbance of digestive functions, in which the bowels were more than usually distended with flatus. It then occurred to him that this distension of the bowels was one of the main active causes of hernia, and that the tissues ordinarily constituting the stricture were merely *passive* means of constriction. A hernia which had frequently formed, and been readily reduced by the patient himself, during an attack of indigestion occurs, and resists his efforts at reduction; probably soon becoming strangulated. On investigation,

* The English Surgeon, Mr. Thomas Tatum, as early as 1854, succeeded in returning a very large loop of intestine by evacuating the gaseous contents with a grooved needle. In this case the stricture had been cut and the sac laid open before the needle was thought of. Mr. Birkett, of Guy's Hospital, upon the idea carried out by Mr. Tatum, suggested that a filiform trocar and canula would better serve the purpose; but I have never seen any case recorded in which it was used primarily in treating hernia, or as adjuvant to herniotomy. An intelligent German physician of this city told me, however, that he had seen the record of a case so treated in Germany in 1869.

this state of things may be easily understood. The loop of intestine, more than usually distended, presses with greater than usual force upon the walls of the abdominal ring (supposing the hernia inguinal); this pressure at first seems simply to *impede* the return of venous blood, but soon the capillaries become distended by passive congestion, and the coats of the tumor become swollen, and press with still greater force upon the stricture. Circulation is at length altogether arrested, and the hernia strangulated. In such a case, which is a typical one of strangulated inguinal hernia, the cause is plainly gaseous distension; and it very naturally occurred to Dr. Cummins, that by removing the cause the effect would be properly disposed of; and as soon as he provided himself with what he considered a proper instrument for the purpose, he treated hernia by evacuating the gas.* The question as to what cases should be treated by this plan, is easily answered; every hernia which contains gas, liquid, or both, even if a hernia fails of being rendered reducible, the patient may by this operation be immeasurably benefited by having the strangulation relieved.

3d. When must the operation be performed? If it is a safe and efficient means, there is no conceivable reason why it should not be applied at once; as soon as the medical attendant reaches the patient. If it proves a failure, its failure may depend upon conditions which would render taxis also futile; and taxis is the immediate alternative (the knife, as a rule, being defined as a last resort). But for the benefit of those who may feel inclined to try taxis a while first, I quote the following from Mr. Birkett, a contributor to "Holmes's Surgery." "Let it not, however, be assumed that the morbid conditions of a hernia now described are always inevitably due to compression, which the orifice of the sac has exerted around it. Such is not the fact. The tissues of the herniated viscus are rarely so firmly constricted as to produce in a short space of time complete mortification, abso-

* I learn from Dr. Cummins that, as early as 1864, he would have treated hernia by the evacuation method could he have obtained an instrument suitable for it.

lute death of the whole of the knuckle of bowel in the sac; yet this state of the hernia is often met with. In these cases the protruded viscus has been subject to another source of damage and destruction. Under the mild expression of the use of the taxis, the hernia has been forcibly compressed by manipulation; its tissues have been contused and irreparably damaged; blood has been extravasated in profusion between the different layers of the tissues composing the viscus, and complete disorganization of its structures is the result of the injury."

This is not a description of the condition of exceptional cases, but is applicable to a very large proportion of cases operated upon at Guy's Hospital. The average mortality per annum following operations for hernia in London a few years ago, was reported by the Registrar-General to be 148, and after a careful examination of a large number of these, Mr. Birkett estimates that the death of two-thirds was due to results of delay and injury done by taxis. From these considerations it is clear that the new operation ought to be performed at once.

The usefulness of the canula-needle is not confined to the treatment of hernia; it constitutes a most excellent appliance for determining the character of tumors; and when we consider the large space devoted to "diagnosis" in the discussion of hernia in works on surgery, we are enabled to appreciate the value of such a diagnostic means. Some of us, perhaps, have felt the need of it in our practice. I know of cases where grievous mortification might, by its use, have been saved the physician. It may be plunged into a tumor about the nature of which the physician is uncertain, and whether it turns out a hernia, a psoas abscess, or a hydrocele, (the patient is not injured, nor the doctor's reputation jeopardized) he can continue its application as a most efficient means of treatment. I believe it is likely to be used in the case of no kind of tumor when any bad result can follow.

A few words about the needle itself. The largest one made for the ordinary hypodermic syringes will do moderately well. it ought, however, to be much larger; a calibre, say, of about

one-sixteenth of an inch in diameter. Dr. Cummins suggests that the point should be made somewhat spear-shaped, so that it may penetrate readily without cutting the tissues. It would be well, I think, for instrument-makers not only to supply pocket-cases with this instrument, but to have one in every hypodermic syringe case, as the removal of liquids will often be greatly facilitated by a pumping apparatus. It frequently occurs, especially when the hernia has been subjected to prolonged taxis, that a considerable quantity of serum, which is sometimes mixed with blood, is thrown out in the space between the sac and the contained loop of intestine. This ought certainly to be removed, and its removal may be more effectually accomplished by means of a syringe.

NOTE.—Since writing the above, I have had made, suitable for treating hernia, a small trocar and canula, by Alfred Whittington, an instrument-maker, who has lately moved to the city.

Mr. Whittington's address is Third and Jefferson, Louisville, Ky.

## PROCEEDINGS OF SOCIETIES.

**"Etsi non prosunt singula, juncta juvant."**

ART. I.—GLEANINGS FROM THE TRANSACTIONS OF THE MEDICO-CHIRURGICAL SOCIETY. Reported by Drs. J. A. LARRABEE and F. P. WILSON, Publishing Committee.

Dr. Brandeis had been much interested lately in an article by Scanzoni, setting forth the dangers liable to attend the employment of laminaria to dilate the cervix-uteri. He states that the sea-tangle has fallen into disuse, and must be considered as inferior to operative procedure upon the cervix-uteri. The laminaria is still used in England to explore the uterus for growths, tumors, etc., and for the arrest of hæmmorrhage. The dilatation of the cervix by this means is not well borne by women generally. Metritis, peritonitis, formation of abscesses, and the

like, have been the too frequent results of such treatment. Cases are cited showing the unequal expansion of the sea-tangle, and frequent instances of the tents having been broken in the attempts to remove them are mentioned, necessitating surgical interference for their removal. Dr. Brandeis had, during the past winter, met with a similar accident in the use of the ordinary sponge tent. The case was one of obstinate and continued uterine hæmmorrhage, and in order to explore and medicate the uterine cavity, a sponge-tent was introduced and retained for twenty-four hours, at the expiration of which time an attempt was made to withdraw it. The string, with a small portion of the sponge, came away, leaving the larger portion within the uterus, and it could not be reached or withdrawn by the forceps. In this condition, Dr. Brandeis determined to further dilate the cervix with a fresh sponge, which was done, after which a second attempt to grasp the fragment with a slender pair of forceps succeeded, and it was brought away. Marked symptoms of metritis and peritonitis followed, but the patient recovered.

Dr. Gaillard thought the best and most satisfactory experiments, showing the comparative usefulness of sponge and laminaria tents, had been made by Dr. J. C. Nott. He describes three varieties of the laminaria, two of which are prone to dilate unequally and give bad results. That from the Bay of Fundy dilates equally when subjected to the warmth and moisture of the secretions, and becomes coated with a mucillage which renders its extraction an easy matter. The same observer has formed quite a serious objection to sponge-tents; that the small portions of the sponge dilate unequally, and give rise to the unpleasant symptoms and consequences before mentioned.

Dr. Forrester reported a case of labor, in a primipara, in which he had used hydrate of chloral. The membranes had ruptured prematurely, the os being undilated, and the chloral was given in forty-grain doses. In a short time its use was followed by drowsiness and some sleep, but the os remained unaffected. Twenty-four hours afterwards the child, being dead, was delivered by craniotomy.

Dr. Gaillard alluded to the use of extract of belladonna locally in such cases, and asked for the experience of the members.

Dr. Forrester thought that very little absorption of the drug could take place by the os at such times and under such conditions.

Dr. Wilson reported a very interesting case of retro-pharyngeal tumor in a woman forty-five years of age. The tumor had existed more than a year, seeming to have originated in the neighborhood of the right ear, and then extended downwards, encroaching upon the posterior nares, obstructing the breathing, and even interfering seriously with deglutition. When he first saw the case, he supposed it a simple abscess, but upon further examination could discover no evidences of suppuration, nor was he able to find matter, though he passed in the needle of the aspirateur in several places. The tumor was distinctly lobulated and slightly movable.

He then determined to treat the case by electrolysis, which was done by inserting into the centre of the tumor needles attached to the negative pole of the battery, while the positive pole was applied by means of a moist sponge behind the right ear. The current was thus passed through the tumor for five minutes, producing considerable pain for a short time. He had that day made the second application, the tumor having been perceptibly diminished in size since the first sitting. The result of these two sittings is such as to remove all doubt as to the efficacy of this mode of treatment.

Dr. Brandeis could not see the necessity of applying the pole behind the ear, and thought the better plan would be to use two needles, and insert both into the tumor, thus passing the current directly through the tumor.

Dr. Wilson explained that the tumor extended along the posterior wall of the pharynx in the direction of the right ear, and could not well be reached in any other way.

Dr. McBurnie reported a case of scrofulous ulceration, with necrosis in the tibia, cured by the local appication of carbolic acid and linseed oil, and the internal administration of ten

drops of the perchloride of iron three times a day. The patient was a lad about eight years of age. There were three fistulous openings over the tibia, with sinuses leading to diseased bone. Under this treatment the appetite became good, the sanious discharge changed to a laudable pus, and the openings healed rapidly. Dr. McB. did not know how much of the solution of the diseased bone to attribute to the acid, or whether the improvement was the result of the constitutional treatment. The remarkable and noticeable feature in the case was that around the healed openings, where the carbolic acid was applied, a thick growth of hair was produced.

Dr. Childs remarked, that the first notice he remembered to have seen of the local use of carbolic acid was for alopecia, by Dr. Bennett, and it produced a growth of hair two inches long.

Dr. Satterwhite had treated a necrosed tibia with the acid and oil after removing a piece of dead bone as large as his thumb. The cure was perfect, though the patient had had syphilis.

Dr. Forrester had seen two cases where the application of the carbolic acid and oil to diseased bone caused it to granulate over and give no further trouble. He had also seen much benefit from the application of sulphuric acid in syphilitic necrosis under the head of nervous diseases.

Dr. Forrester reported a case of persistent cramp cured by hydrate of chloral given in one-scruple doses at bedtime for three nights in succession. The patient was a man passed middle life, and had been tormented for twenty years with cramps in his feet and legs, for which he had tried many remedies without benefit. In answer to a question, Dr. Forrester stated that he could discover no tenderness upon pressure along the spine.

Dr. Satterwhite did not think that, if the spinal membranes alone were affected, a diagnosis could be made upon pressure over the spine, and related a case which occurred in the practice of Dr. S. P. Breckinridge, in which a point upon the toe was the seat of severe pain, which, after much medication without avail, was cured by blistering the spine.

Dr. Larrabee reported a case of a negro whom he had treated for well-marked cerebro-spinal meningitis. After all active symptoms subsided, he would taste food at long intervals, answer direct questions, but remained insane, constantly mumbling, and at times becoming violent, breaking glass, biting the plastering, etc. He would like to know if others had had such sequelæ follow this terrible disease.

Dr. Forrester thought it not uncommon.

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### Central Kentucky Medical Association.

The Central Kentucky Medical Association held its third regular meeting at Harrodsburg on the 19th of July last, the president (Dr. Spilman) in the chair.

The debate was opened by Dr. S. P. Craig, of Stanford, with an excellent paper on *Medical Societies, their Organization and Influence on the Progress of Medicine.*

Several interesting cases were reported during the day. One by Dr. John D. Jackson of vesico-vaginal fistula, with operation and cure. This is noteworthy as being the first case treated successfully in this region.

Dr. A. D. Price reported a case of dysentery, exhibiting at the same time a portion of the large intestines, colon, etc., in which the inflammation was as severe in the duodenum as in the lower bowel, the small intestines escaping; there was also persistent hiccough for several days before death.

Dr. Rose exhibited a fibroid testicle, much enlarged, taken from the father of ten children.

Dr. Jackson exhibited the trachea of a man who had died of phthisis, showing extensive ulceration, and total destruction of the epiglottis.

The chief point of interest in this case was the loss of voice before the existence of tubercles could be discovered by the most careful examination.

The meeting was very harmonious and instructive, and was made very pleasant by a handsome entertainment of edibles and potables, given by the "Mercer County Medical Society."

The Association adjourned at 4 o'clock P. M., to meet at Stanford on the 18th of October, on which occasion Dr. McKee, of Danville, will open the debate with a paper on *Fractures of the Long Bones, their Diagnosis, Nature and Treatment.*

GEORGE F. ERWIN, M. D., Secretary.

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ROOMS OF MEDICAL SOCIETY OF DISTRICT OF COLUMBIA,
WASHINGTON CITY, July 5, 1871.

Whereas Dr. Thomas Antisell, a member of this Society, is about to leave this country for the purpose of visiting regions of the earth the most remote from us, and since it is eminently proper that on such an occasion the Society should give expression to its regard for him, and should point out the estimation in which he is held by this community; therefore

*Resolved,* That while it regrets the loss of his valuable advice and assistance in its deliberations, and recognizes the sturdy honesty and independence with which he has always defended its honor and interests, it yet feels that it will be amply repaid by the results of his scientific investigations in the ancient and civilized, but hitherto almost unknown region to which he is about to direct his attention.

*Resolved,* That the Society deems that he leaves behind him an enviable record in the eminent talent with which he has filled various offices of honor and trust among the highest in its gift, and it gladly acknowledges his energy as one of the originators and most earnest and able promoters of its weekly scientific discussions.

*Resolved,* That in the satisfaction which he has given the Government in the scientific stations to which it has called him as a medical officer of high grade during the late war, as an examiner of chemical patents in the United States Patent Office, and as Chemist-in-Chief of the Department of Agriculture, and in the ability displayed as a professor in our medical colleges, he has continued to add to his own reputation and to sustain worthily the credit of the Profession.

*Resolved,* That in bidding him farewell we cordially wish him a fortunate issue of his undertaking, a safe return to his friends, and in his scientific researches God-speed.

[Copy from the Minutes.]

J. M. TONER, M. D., President Med. Soc'y of D. C.

WM. THOS. DRINKARD, M. D., Corresponding Sec'y.

# ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

LEESBURG, LOUDOUN COUNTY, VA., August, 1871.

*Dr. E. S. Gaillard:*

Dear Sir,—On reading the editorial on "Venæsection" in the April number of your valuable Journal, where reference is made to the "adynamic wave" of authors, I am induced to offer a few *wrecks* from the stranded shores of observation and experience to those *inductive* etiologists who acknowledge no mystery or hidden agency in the production of disease. I was a practitioner of medicine in the Valley of Virginia, Clarke county, from the Spring of 1832 to that of 1862, having graduated at the University of Pennsylvania in 1830; and claim an experience of thirty years with the diseases of that section, besides a familiar acquaintance from childhood up (being a native of the Valley), with the incidents and events of general character antecedently transpiring there.

Bilious remittent fever had been the scourge of the Valley from its earliest settlement up to the year 1832, appearing every Fall with more or less severity, while Winter was a season of health. From the days of the Revolution, certainly, and even prior to that time, according to tradition, this fever scourged the Valley of Virginia; and well do I remember from early years to have been almost an annual victim to it up to the time of my departure in 1824, to return in 1832.

In the Spring of 1832 the "Asiatic cholera" broke out at the "Point of Rocks," on the Baltimore and Ohio railroad; and while bilious remittent fever had prevailed during the Fall of 1831, with its accustomed severity, I had not the opportunity of witnessing a *single case* the succeeding Fall, nor did I attend a *single case* of "bilious fever" (so called) during the thirty years I practiced medicine in the Valley, some forty miles from

the Point of Rocks up the Shenandoah river, a tributary of the Potomac, in the county of Clarke. This, according to my professional experience, was a most singular coïncidence, if not the result of cause and effect. My practice was large and laborious, affording me ample opportunity to observe the type and progress of disease prevailing in that region.

The Winters, that heretofore had been the season of health, became, instead, the sickly period of the year; introducing pneumonias, pleurisies, and inflammations generally, while the Falls continued to be bracing and healthy, an occasional intermittent constituting the only type of fever up to 1845.

In the Spring of this year the first case of typhoid fever, in the adjoining county of Warren, came under my notice, though for twelve months or more it had prevailed in the adjoining county of Fauquier, in Frederick and Hampshire counties, and in adjoining communities, with fatal result, the *savans* of the Profession not understanding its pathology and type, and administering, as was subsequently demonstrated, *too much* medicine.

This fever continued, with greater or less prevalence, up to the time of my departure for the Confederate service in the Spring of 1862, though evidently on the decline, and far more respondent to remedial management.

Disease of every class assumed a frank, roborant, sthenic or dynamic character in 1832, requiring energetic means of cure, and particularly prompt depletion by the *lancet*. When called to a case pneumonia with full, strong pulse, hot skin, dyspnœa, and difficult bloody expectoration, corroborated by the usual auscultatory signs, the arm was at once ligated, and in the semi-erect posture blood abstracted ad deliquium. Should reäction follow quickly, with return of symptoms, the vein was reöpened and blood allowed to flow freely until there was free respiration, subsidence of pain, and evident amelioration of condition. This was succeeded by defibrinizing remedies, and in the course of eight or nine days the patient was convalescent. So with inflammatory diseases generally; but after the ingress of typhoid

fever in my neighborhood in 1845, the *lancet* could be rarely used in any disease whatever, so invariably did the *asthenic* type prevail, requiring for the most part stimulants and sustaining remedies. Pneumonia, which before had been successfully treated by vigorous blood-letting, now demanded its abandonment, and a sustaining plan of treatment with cups and vesication, when indicated or admissible, adopted.

Upon this narration of *facts* we desire the analysis by *induction* or *deduction*, observation or experience, to displace the idea that opposite conditions of system, or antagonistic etiology in disease, had not been exemplified at these *two periods*, evidently calling for change of *practice*. Writers on epidemics, including the great reformer, Sydenham, speaks of certain "*constitutions*," ("constitutio morborum stationaria,") of atmosphere giving rise to *certain* diseases that had not prevailed for a length of time before, if ever, in type and degree; yet, including *malaria* and contagion, it has not been left *inductive philosophy*, with all the numerous appliances of science, to unfold their elements or hidden mysteries; still, "it is the aim of art to *use* facts, but of science to *understand* them."

"Adynamic wave" is but a trope to convey a clearer idea of that "constitution," that "constitutio morborum" of Sydenham, or that change the result of "*forces*" *correlative* and *conservative*, whose action yet remains unexplained, and still to be demonstrated on the *blackboard* of science; and far be it from me to hold the opinion that the "*thinking*" philosopher will not give the successful demonstration.

Dr. Aitken, in his "Science and Practice of Medicine," 1868, says "diseases appear to be changed, according to the best authorities, from what they were fifty years ago," and gives the following quotations from Dr. Alison's writings: "Many of the symptoms, and particularly the constitutional fever usually attending internal inflammations, and resulting from cold or from other causes independent of the application of morbific poisons, are liable to variations in like manner, although not so decidedly nor so rapidly as the epidemic diseases. In course of

time, and from causes not yet known, they have in fact undergone very considerable change since the early part of the present century; and *it is on this account* that inflammations of the lungs, in particular, are treated with equal success at present, with much smaller loss of blood than they used to demand." And according to the experience of the late Dr. Alison, recorded in a series of papers published in the "Edinburgh Medical Journal," 1855,-56, and 57, diseases are asserted to have changed not only in type, but the tendency to death is most usually by *asthenia.*

Prof. W. T. Gairdner, of Glasgow, in clinical papers published in the "Lancet," March 12th, 1864, says that "doctrines not very dissimilar to those of Dr. Todd were taught as early as 1826 by my much revered teacher, the late Dr. Alison. Dr. Todd was both more extreme and more indiscriminate in his use of stimulants than Dr. Alison, the latter relying upon a *specific change of type* in disease as the justification of his practice."

Dr. Markham, however, in his Gulstonian Lectures on "The Uses of Blood-letting in Disease," and Dr. J. H. Bennett, of Edinburgh, as well as Dr. Watson, after his renunciation in 1866, may be arrayed in favor of the opposite opinion; but with what justice the observation and experience of the enlightened and candid of the Profession must determine.

Some years ago two cases of dysentery occurred within the circle of practice in the same family, one succeeding the other by a few days, and the only cases I had with that disease under treatment. Such was the obduracy of the first case to remedial impression that I called in consultation Dr. H. H. McGuire, of Winchester, and notwithstanding the most assiduous attention the case proved fatal, dying with gastro-enteritis in the last stage. The second case was also fatal in like manner. I then remarked to the Doctor, that should I be called to other cases I should bleed to syncope, believing that I should subdue the inflammatory action in the first stage, when the patient was able to bear it, and in that way divert the tendency of the disease from continuous inflammation up the intestinal canal, and

thereby prevent gastro-enteritis. I adopted the practice, and did not lose a case subsequently during the prevalence of the epidemic. It was the custom of the great Sydenham to observe with unremitting and minute attention the first cases of all epidemics and diseases of novel type appearing in London, and the pathological cause and manner of death was the exponent and guide to the remedial course to be adopted subsequently with other cases.

This hint or lesson admonished me in the cases alluded to, and as autopsy in rural practice was revolting to the popular sense, my only resource was *clinical observation* to point to correct practice, which proved, happily, Delphic on that occasion; and while the legacy of Bacon may furnish the *general rule*, observation of and experience with *facts* should not be too eagerly rejected and abandoned. Centuries have held the records of observation and experience to be the landmarks of medical science, whether inscribed by the humoral pathologist, the solidist, chemist, microscopist, electrician, or the cell-actionist; and though the cosmological style of *progress* now-a-days has apparently infatuated mankind, would it not be prudential, and the safer part, to advocate still their employment as *adjuncts* rather than their removal as *obstacles* in the pathway of science? It must not be understood that the ingress of Asiatic cholera at the Point of Rocks displaced remittent bilious fever throughout the Valley of Virginia, or dissipated it from the regions of the Potomac and Shenandoah rivers—this I do not assert; but that this fever ceased its *autumnal periodicity* in the section of the Valley where I practiced the succeeding Fall, made a deep and lasting impression upon me professionally, presenting a phenomenon of interest to the medical mind worthy of *inductive* solution.

Your obedient servant,

J. H. Faunt Le Roy, M. D.

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Greensboro', Ga., 1871.

Mr. Editor,—The *short* letter of A. Sayre, M. D., of Bur-

lington, Ky., published in the May number of your valuable journal, requires not quite so short a notice from me.

The Doctor says "he endorses the correctness of my treatment," but objects to my claim to originality. Now, if he had read the note and extract from Dr. Hodge's work on Obstetrics, which were appended to my report, as carefully as he seems to have read the report, he ought to have discovered that I had surrendered the claim to which I thought myself entitled.

The extract was furnished me by a distinguished Professor of Obstetrics and personal friend, who remembers treating *one case* only, about twenty years ago, by the method indicated in my report.

I have met with no author who recommended it, nor physician who practiced it, until after my report was sent to the office of the "Journal" for publication.

I may claim that, so far as I am individually concerned, I did *originate* the practice, not because such cases "naturally suggest digito-rectal pressure," but because in such an emergency a law of mechanics would suggest the practice to some minds, while it would escape entirely from others. If it was "naturally" suggested, the practice would be common, and many more children would have been preserved alive.

If Dr. Sayre had published his cases, as I have done, then surely I could have laid no claim to "originality," nor would I be entitled to the credit of first giving my professional brethren, through the proper medium, the benefit of my experience. I trust the report may reach the eye of every practitioner throughout the land; very few, I find, possess Dr. Hodge's work, and he did not seem to attach as much importance to the practice as, in my humble judgment, it demands. An eminent physician, who attended Dr. Hodge's lectures, writes me that my report "contains the information that he has long been seeking."

I hope my professional brethren, when opportunity offers, will give the practice a trial. I can assure them that they will not be disappointed.

I have treated *one other* case of the kind since the report was published, by the same method, with like satisfactory results.

Very respectfully,

JOHN E. WALKER, M. D.

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FORT WORTH, TEXAS, 1871.

*E. S. Gaillard, M. D., Editor Richmond and Louisville Medical Journal:*

Sir,—During the last two or three months I have had occasion to "draw" several blisters with emplastrum cantharidis, and as complete and uniform vesication was secured in every instance in three hours or less (much less than the time usually required), I have thought that my mode of procedure might not be uninteresting to some members of the Profession; hence this communication.

I proceed as follows: Having spread the cerate on cloth, I spread on the surface of the cerate a piece of printing or other soft paper, and having saturated this with acetic acid, I smooth it well down on the plaster, and let it remain fifteen or twenty minutes; then remove the paper and apply the plaster (its surface still moist) to the part where vesication is desired.

I shall not attempt to say whether this increased effect is due to an increased activity given to the plaster or increased susceptibility to the cuticle.

Respectfully,

I. L. VAN ZANDT, M. D.

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## REVIEWS AND BIBLIOGRAPHICAL NOTICES.

**"Judex damnatur cum nocens absolvitur."**

ART. I.—HAND-BOOK OF MEDICAL MICROSCOPY. By J. G. RICHARDSON, M. D., etc. Philadelphia: J. B. LIPPINCOTT & Co. 1871.

This manual is presented by an expert. It is intended for physicians who have but little time to expend on microscopical

studies other than those immediately necessary in the laboratory. For such workers it is an admirable guide. The language is simple and lucid, the style good, and the arrangement acceptable. It is handsomely illustrated and well published. As an aid in examining physiological and pathological products, it is valuable and instructive. The price will not exceed $1.50.

PHYSICIANS' PRESCRIPTION-BOOK. By JONATHAN PEREIRA, M. D., etc. Fifteenth Edition. Philadelphia: Lindsay & Blakiston. 1871.

The object of this little duodecimo is to furnish to students and druggists the past and prevailing methods of prescription. The mode of writing prescriptions is well and clearly taught. All of the usual Latin directions are given. One of the most useful and welcome parts of this work is that in which the correct pronunciation of the names of medicines usually used is given; this is arranged in the form of a prosodiacal vocabulary. The cost of the volume will not exceed $1. The publishers have issued the volume acceptably.

THE EYE IN HEALTH AND DISEASE. By B. JOY JEFFRIES, M. D., etc. Boston: Alexander Moore. 1871.

This volume is intended both for the Profession and the laity. As in all such works, there is objectionable matter apparent. The subjects treated are in many instances too superficially and insufficiently analyzed for the Profession, while in others there is much which the laity cannot understand or appreciate. It is about as acceptable and valuable as such works usually are; but it must be confessed that such testimony cannot be justly regarded in the light of commendation. The publishers have issued it well.

STANDARD SUPPLY TABLES OF THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY.

Like all of the publications issued from this Department, this little volume evinces the result of much labor and a most commendable economy.

## MISCELLANEOUS NOTICES.

OBSTETRIC REPORT OF THE CHARITY HOSPITAL. By JOSEPH JONES, M. D., Chief Obstetrical Clinic.

This report is a valuable tabulated record of the cases attended. Like all of the work executed by Dr. Jones, it evinces the rarest attention to minute details, with a most commendable industry and fidelity in their elaboration. All of the clinical facts desired or necessary are carefully and clearly recorded.

A REPORT ON OVARIOTOMY. By J. TAYLOR BRADFORD, Augusta, Ky.

This report embodies not only the parts germain to each case, but gives most valuable information in regard to the literature of this subject. It is concisely and clearly written, and evinces the fact of Dr. Bradford being not only a faithful reporter, but one of the most successful operators in this country. There are given the details of eleven operations, with only one death, and this was due to fibrous complication of the uterus. On the 1st of May, 1869, Dr. Bradford had operated on twenty-seven cases, with only three deaths. Those specially interested in this operation will do well to apply to this accomplished operator for a copy of his pamphlet.

ANNUAL REPORT OF THE MISSISSIPPI STATE LUNATIC ASYLUM FOR THE PAST YEAR.

Under the excellent professional and administrative labor of the faithful physician in charge of this asylum, it appears to be in unexceptionable condition. Dr. M. B. Compton, the physician in charge (the present President of the Mississippi State Medical Association), is deservedly esteemed for his personal qualifications and professional accomplishments, and the asylum under his charge is justly a source of pride and satisfaction to all interested.

THE DETECTION OF CRIMINAL ABORTION. By E. VAN DE WARKER, Syracuse, N. Y.

The Profession has an abundance of valuable literature in

connection with the subject of criminal abortion, but it boasts of but little in regard to that portion of it which treats of the means and methods of detecting criminal abortion in the earlier periods of gestation. This pamphlet elaborates this subject very well indeed, and is a valuable contribution to medical literature.

A Case of Skin-Grafting. By J. W. Strader, M. D., Sedalia, Missouri.

This is a brief but excellent report of a case in which grafting was used to produce covering for a stump denuded by sloughing. The method adopted was that advised by M. Reverdin, of Paris, and practiced by Pollock, of London. The result was all that could be desired. None of the grafts failed to grow.

An Assault upon the Washington University of Maryland (Baltimore) by the University of Louisiana.

It appears that a student attended a course of lectures upon Anatomy, Materia Medica, Physiology, and Chemistry, in the Louisiana school, and then desired to know of the Dean of the Baltimore school whether he (the student) would be allowed to come forward as a candidate for graduation in the coming Spring, provided that he attended the Summer course (a full course) and the Winter course (a full course) in the Baltimore school. He was informed that he would be allowed to do so, for he would thus have enjoyed two full courses and one half course of lectures in two successive years. The University of Louisiana has, in consequence, determined to repudiate the diploma and tickets of the Washington University, and has appealed to other medical colleges to adopt the same course.

It is needless to say that the action of the Faculty of the Louisiana University will not only be unsupported, but that it will be justly condemned.

## CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

*Hypodermic Use of Ergot in Uterine Disease.*—Dr. Von Swiders, strongly recommends the subcutaneous injection of ergot in uterine affections, especialy chronic metritis and metrorrhagia. Severe bearing-down pains are said to be often produced, coming on, in from a half to one hour.

His formulæ are, where a rapid effect is desired: Aqueous extract of ergot, 2.5 parts; rectified spirits and glycerine, each 7.5 parts; aqueous extract of ergot, 2 parts; rectified spirits, 5 parts; glycerine, 10 parts. Where a slower and slighter action is desired, aqueous extract of ergot, rectified spirits, each 2.5 parts; glycerine, 12.5 parts; aqueous extract of ergot, 1 part; rectified spirits, 1.5 parts; distilled water, 4.5 parts; glycerine, 3 parts.—*Wiener Medizinische Wochenschrift*, January, 1871—*New Remedies.*

*Solution of Santonine.*—It is often desirable to obtain a solution of santonine, especially for injection in parasitic disease of the bladder, etc. According to Dr. Jno. Harley, a concentrated limpid neutral solution may be obtained, which will bear dilution to any extent by the following method:

Take of Santonine in powder, gr. xii.;
Bicarbonate of soda, grs. xx.;
Distilled water, ℥ iij.

Put the soda and water in a flask. Keep the fluid near the boiling point, adding, as it disappears, about two grains of the santonine at a time, until the whole is dissolved.

By continued boiling the fluid may be reduced to two ounces, when it will contain six grains of the santonine to the ounce. If the alkaline reäction be objectionable, neutralize carefully with acetic acid. The solution is tasteless, except in regard to the acetate of soda.—*London Practitioner—New Remedies.*

*Martindale's Copaiba Jelly.*—

Take of Thick copaiba, ℥ viii.;
Powdered sugar, ℥ iv.;
Honey (not crystalized), ℥ iv.;
Distilled water, ℥ v.;
Oil of peppermint, ℥ i.;
Roseine (dissolved in mxx. water, 1-10th gr.

Put the honey, sugar, copaiba, and water into an evaporating dish. Keeping it well stirred, heat the mixture gently till it boils, and continue the agitation and ebullition about five minutes. In the first part of the operation two distinct strata are formed—the upper, the copaiba; the lower, the honey, etc. As the water evaporates it becomes a homogeneous jelly. When it has partly evaporated, stir in the roseine (aniline pigment) and oil of peppermint. An ammoniacal solution of carmine may be substituted for the aniline color. According to Mr. Berkely Hill, this jelly, when well made, has the consistency of calf's-foot jelly, is very handsome, and not repulsive to the palate, the peppermint masking the copaiba. A piece the size of a filbert, rolled in wafer-paper, may be swallowed without tasting.

It contains fifty per cent. of copaiba.—*London Lancet—New Remedies.*

*Sweet Tincture of Rhubarb (Best).*—

Take of Rhubarb, bruised, 2 ounces;
Liquorice root, bruised, 2 "
Aniseed, bruised, 1 "
Sugar, 1 "
Diluted alchohol, 2 pints.

Macerate for fourteen days, express and filter.—*New York Druggists' Circular—New Remedies.*

*Unguentum Acidi Carbolici.*—

Simple ointment, benzoated, 4 pounds troy;
Carbolic acid, crystalized, 3 ounces 96 grains.

Liquefy the acid by immersing the vessel containing it in hot

water, and when the ointment is about congealing, add the acid, stirring it with a strong wooden spatula.

Each drachm contains three grains.—*Chas. Fredigke, Chicago Pharmacy—New Remedies.*

*Spirit of Sandal Wood.*—

Take of Oil of sandal wood, ℥ i.;
Alcohol, ℥ ii.;
Oil of cinnamon, mxxv. Mix.

Dose, one to two drachms three times a day.—*Dr. Henderson, London Lancet—New Remedies.*

*Soluble Pills of Quinine.*—

Tartaric acid, grs. iv.;
Sulphate of quinine, grs. xx.;
Conserve of rose, q. s.

To be made into ten pills.—*M. Cazac, Lyon Medical—New Remedies.*

*Poor Man's Plaster.*—

Take of Beeswax, 1 ounce;
Tar, 3 "
Resin, 3 "

To be melted together and spread on paper or muslin.—*New York Druggists' Circular—New Remedies.*

*Suppositories for Piles.*—

℞.—Butyr. theobromæ, ℥ i.;
Iodoformi, ℥ i.;
Ft. suppositor, viij. M.

[*New Remedies.*

*Aniseed Cordial.*—

℞.—Ol. Anisi, ℥ ss.;
Sacch. Alb., ℥ ij.;
Syr. Simpl., ℥ iij.;
Sp. Vin. rect., ℥ viij.;
Aq. destill., ℥ xxx.

The oil to be well rubbed with the sugar; add the water gradually; mix the remaining ingredients, and filter.

[*New Remedies.*

*Fumigating Pastilles.*—

1—Take Benzoin, 2 ounces;
Balsam of Tolu, 4 drachms;
Yellow Sandal-wood, 4 drachms;
Nitre, 2 drachms;
Labdanum, 1 drachm;
Charcoal, 6 ounces.

Mix with a solution of gum tragacanth, and divide the mass into pastilles, cone-shaped, and dry them in the air. The foregoing is the formula of the Paris Codex.

2—Take Benzoin, 4 ounces;
Cascarilla, ½ ounce;
Nitre, 3 drachms;
Gum Arabic, 3 drachms;
Myrrh, 1 drachm;
Oil of Nutmeg, 25 drops;
Oil of Cloves, 25 drops;
Charcoal, 7 ounces;

All in fine powder. Beat them to a smooth mass with cold water, q. s., and form into small cones and dry in the air.—*Druggists' Circular and Chemical Gazette—New Remedies.*

*Hair Wash (Best.)*—

℞.—Glycerine, ℥ ij.;
Tincture of Myrrh, ℥ j.;
Cologne, ℥ j.;
Tincture of Cantharides, ℥ ss.;
Distilled Water, ℥ xxiv. M.

[*Pharmaceutical Journal—New Remedies.*

*Physiological Action of Some New Chemical Derivatives of the Opium Alkaloids.*—When a decigramme of the hydro-chlorate of chloro-tetra codeia, and hydro-bromate of cromo-tetra morphia is administered hypodermically or by the mouth to adult cats, in a few minutes a state of great excitement, amounting almost to delirium, accompanied by a copious flow of saliva and great dilatation of the pupils, was produced. The excitement

was very peculiar, apparently due partly to increased sensitiveness to noises, and partly to an impulse to rush about.

The same doses of the morphia sulph. given to a young kitten produced the same flow of saliva, dilatation of pupils, and excitement; but the stage of excitement, which in adult cats passed off in a few hours, was followed by a condition marked by a want of coördination of muscular movements, and presenting the most grotesque resemblance to certain stages of alcoholic intoxication. This stage was followed, in turn, by sleepiness and stupor, in which the kitten was left at night; in the morning it was found dead.

Salts of deoxy-codeia and deoxy-morphia given by mouth or subcutaneous injection in doses of a decigramme, produced in adult cats, almost immediately after exhibition, a series of convulsions much more epileptic than tetanic in their character. In one case there was a distinct rotary movement.—*Michael Foster, M. D., in Nature, June* 29, 1871.

## MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

*Dr. D. H. Agnew* has lately had under his care, in Pennsylvania Hospital, a case of ununited fracture of the tibia of fourteen weeks' standing. "The muscles of the leg were atrophied, and the patient's health was below par, owing to long confinement." After being placed under the influence of ether, Dr. Agnew passed a long gimlet through the integuments on the anterior surface of the leg, and to the outer side of the spine of the tibia, obliquely upward and backward through the ends of the fragments, bringing them into accurate apposition and holding them firmly together. The gimlet was removed after thirty days, when it was found that firm union had taken place. While

in, the gimlet gave rise to no sloughing or ulceration. The leg was enveloped in starched bandage for two weeks longer, the patient walking about on crutches and taking fifteen drops tinct. iron and one grain quinine three times daily, when he was discharged with a perfect leg.—*Medical Times.*

NOTE.—This method was first brought to the notice of the Profession, in the New York Medical Journal for 1865, by the editor of the R. and L. Medical Journal. His illustrative plates, with the descriptive necessary, are embodied in Professor Hamilton's work on Fractures.—ED.

*J. C. Reeve, M. D.*, of Dayton, Ohio, recently extracted a male gum-catheter from the bladder of a woman. The urethra was distended so as to admit the finger, and along this was passed a pair of lithotomy forceps, with which the catheter was seized and extracted. It is remarkable that notwithstanding the distension to which the urethra had been subjected, the patient could perfectly control her urine on the day following the operation.—*Medical Times.*

NOTE.—Several similar cases have been reported—ED.

*Test in Obscure Urinary Disease.*—Sir Henry Thompson states ("British Medical Journal") that in doubtful cases he has been able to arrive at a true diagnosis by passing a flexible No. 6 or 7 catheter into the bladder, while the patient was in an upright posture, and drawing off the urine; then washing out the bladder, by means of an elastic gum-bottle and a few ounces of warm water, until the overflowing fluid showed complete clearness. The catheter being left *in situ*, fresh urine from the kidneys, untainted by any mixture, would now pass *guttatim* through the catheter into a test-tube placed to receive it. This might be regarded as a pure renal secretion, and in a few moments sufficient of it for chemical, analytical, and microscopical purposes collected; but in cases where the bladder is so very irritable that it bleeds from instrumental contact, this mode of examination becomes imperfect. Sir Henry wishes it not to be forgotten, in estimating the products of urine, that for equal quantities of blood and pus the former produces a much more

bulky precipitate of albumen than the latter. Consequently the disposition to slight bleeding as a result of the procedure, and any augmentation of albumen, bring strong evidence of vesical rather than renal disease.—*Ex.*

*Treatment of Syphilitic Swellings.*—Professor Sigmund recommends punctures by an exploring trocar, or by a Pravaz's syringe. The puncture must be performed once or twice a day, followed by an injection of linseed oil with carbolic acid, or by a compress bandage. After the puncture, the pus can also be evacuated by slight pressure. In regard to the general treatment, the author mentions the hypodermic injection of chloride of silver. The solution contains four grains to an ounce of water. At first twelve drops are injected twice a day. The groin and the infra-clavicular region should not be chosen as sites for injection. The cure is rapid, but not sure. In suppurating buboes, Sigmund applies a solution of carbolic acid one part, with linseed oil four parts and lime thirty-two parts, after Lister. It is useless in periadenitis. It requires the same length of time as any other method, but in cases of large cavities it manifests its good effects by diminishing the secretion and bringing up healthy granulations.—*Bericht d Wiener Krankenhauser.*

A new caustic for excrescences and tumors is recommended for its painlessness, local action, and good healing. Bichlorate of acetas is crystaline, colorless, volatile, and can be obtained from vinegar, with chlorine and water, exposed to the sun.—*Schweitzer Wachensch f. Pharm.*

*Dr. Fuller*, after having failed in treating vomiting of pregnant women with prussic acid, nitrate of potassa, oxalate of cerium, opium, nitro-muriatic acid, bismuth, alkalies, and quinine, resorted to ipecac. The prescription was the wine of ipecac, in very small doses, in water, hourly. The vomiting ceased after two or three days. This remedy is also recommended for children troubled with vomiting and diarrhœa.—*Lancet and Revue Therap.*

*Dr. Christian* had a girl under his treatment suffering from hæmorrhage of the nose and several organs, combined with colliquative sweating. Ergot had proved very useful in vanquishing the latter symptom. Afterwards the Doctor employed it in other cases of profuse perspiration with the same success. The prescription was from eight to twenty grains of ergot four times a day.—*Wurtemburg Medical Cor. Blatt.*

*Dr. Fungel* publishes an interesting article on Enterotomy in Ileus. He quotes Nélaton, Maisonneuve, Wachsmuth, and Adelman. The statistics prove that many lives have been saved by this operation. The place of occlusion should not be sought, because it cannot be diagnosticated. The enterotomy is intended to remove the gas and fæces. The obstruction heals spontaneously; or, if it does not, an artificial anus is the result; tympanitic sound is always found above the occlusion; therefore a place for the operation should be chosen where the sound is clear.—*Memorabil.*

*Caustic Ethylates.*—Dr. B. W. Richardson states (*Medical Times and Gazette*): "The ethylates are crystaline substances, in which one atom of hydrogen of absolute alcohol is substituted by one of potassium or of sodium. Brought into contact with the body, the ethylates at first produce no action, but as they pick up water from the tissues they are decomposed, the potassium or sodium is oxidized, yielding caustic potassa or soda in the fresh state, and alcohol is reformed from the recombination of hydrogen derived from the water. I propose the employment of these ethylates as caustics. I believe they will be found to be the most effective and manageable of all caustics; and that in cases of cancer, when it is desirable to destroy structure without resorting to the knife, and in case of nævus and other simple growths, they will be of essential service. The ethylates can be held in solution with alcohol in various degrees of strength; the solution can be applied with a glass brush or injected by the needle, and a slow or quick effect can be insured, according to the wish of the operator. The ethylate of potassium is the most active agent."

*Microscopy; its Wonders.*—"We have a glass slide upon which, in a space less in diameter than the head of a small pin, are arranged, in perfect symmetrical order, *one hundred and four diatoms.* These wonderful vegetable or animal organisms are placed upon the glass in accordance with exact or scientific classification, and represent most of the existing and extinct species. They are not frustules or fragments, but perfect specimens, so admirably prepared that when the glass is placed under the microscope with a first-class half-inch objective, they are seen each distinct and perfect, with all the wonderful and beautiful curves, lines, and cells, which so astonish every observer. This great work of microscopic art is due to the consummate skill of J. D. Möller, a German microscopist. How he is able to accomplish this feat, is no better understood than the process or art by which M. Nobert, of Pomerania, is able to rule upon glass lines so fine that it requires more than twelve thousand to cover the space of an inch. The little speck upon the glass in which are arranged these beautiful organized bodies, is scarcely perceptible to the naked eye; and yet, in this infinitesimal speck the bodies are grouped, with ample spaces between, and the order of arrangement and method is the same as would be observed by a scientific etymologist in grouping one hundred specimens of moths or butterflies upon a sheet of paper. In the speck a whole volume of scientific information is embraced; it is an anatomical and palæontological museum, which can be studied only by the aid of a microscope of the most perfect construction."—*Boston Journal of Chemistry.*

*Iron for Purifying Water.*—"It is claimed that metallic iron affords the readiest and simplest means of disinfecting water and of keeping it fresh. The water of the Thames, taken to sea in iron tanks, soon becomes perfectly sweet, and remains so during a long voyage. A small piece of iron or a few nails in the water in which cut flowers are put, will keep the water sweet. The experiment has been tried of putting some iron filings in a vessel with a very small quantity of water, and then placing a leech therein. After six months had passed, the

water was found quite fresh and the leech alive and healthy. These facts are curious and suggestive."—*Ibid.*

*Sore Mouth from Galvanized Iron Pipe.*—It is stated (*Ibid.*) "A. O. N." writes us from Norway, Me., as follows: "In my family we use water drawn through one hundred feet of galvanized iron pipe. Since it was put in the whole family has been troubled with *very sore mouths.* Probably the zinc salt formed in the water is the *chloride,* which has *caustic* properties of extraordinary character. The affection of the mouth is precisely what we might expect to result from using water containing minute quantities of chloride of zinc."

*Chloroform in Labor.*—Dr. Graily Hewitt, in the Obstetrical Society of London, (*Medical Press and Circular*), uttered the following language: "We have come (some of us, at all events) to recognize the fact that chloroform has a tendency to make labor 'lingering'; that it sometimes enfeebles the uterus, and may thus cause hæmorrhage. This tendency it is proposed to do away with by diluting the chloroform by mixture of alcohol or other vapors, or by accurate mixture with air. Dr. Sansom has pointed out the great liability to the inhalation of poisonously high percentages of chloroform at high temperatures, unless proper care be exercised. Mr. Ellis has given us new inhalers for effecting such mixtures. The general conclusion, I take to be, that in ordinary midwifery practice, the anæsthetic should be diluted; that it should not be given to produce the full effect, and that in all cases rather excessive precautions against hæmorrhage are required when chloroform is given."—*Pacific Medical Journal.*

*Death from Inhalation of Ether.*—At last a veritable case of directly fatal result from ether inhalation comes to light. It occurred in Boston, in the person of a man who had received a bullet wound in the knee, and who was etherized for the purpose of amputation. He suddenly ceased to breathe during the operation. In nearly every instance of death hitherto imputed

to ether, hours, if not days, have elapsed before the fatal result. But the present case is different, resembling in this respect the action of chloroform. The particulars are given in the "Boston Medical and Surgical Journal" of December 8th, 1870.—*Pacific Medical Journal.*

## MEDICAL NEWS.

'Nulla dies sine linea."

Dr. W. W. Dawson, of Cincinnati, has been elected to the Surgical Chair made vacant in the College of Ohio by the death of Dr. George C. Blackman. The most deserved compliment that can be bestowed upon Dr. Dawson is, that he is, in all respects, worthy of succeeding the distinguished surgeon and eminent man, over whose death the medical world is justly in mourning.———Drs. J. A. Ireland, J. W. Maxwell, and C. W. Kelly, teachers in the Kentucky School of Medicine (now suspended), have been added to the Faculty of the Louisville Medical College. At the same time the trustees have secured the services of Dr. J. M. Kellar in the Surgical Chair. These gentlemen are so well known that it is not necessary to say anything in regard to them. They bring increased strength to this College.———The female medical-student question is giving much trouble in Edinburgh and London. The Faculties are generally as opposed to mixed classes as they are to mixed clinics.———The "American Journal of Pharmacy" has sustained a severe loss in the withdrawal of its veteran and accomplished editor, Mr. W. Proctor, Jr.——— John Murray of London, has published the "Familiar Correspondence" of Sir Charles Bell.———All physicians should know that there is now in New York "The Strangers' Hospital." It is a model in every respect, and is well officered.———The exchanges are disseminating the experience of Dr. J. C. Nott,

of New York, in regard to the use of carbolic acid in carbuncle: Acid 1 part; water 40. The carbuncle to be kept always moistened. The results are very excellent.——The London College of Surgeons has just rejected thirty-one per cent. of the applicants.——Philadelphia congratulates Harvard upon the "new departure" in medical education.——In one thousand parts of the lungs of a worker exposed to mineral dust there has been found nineteen parts of mineral and foreign matter.——Dr. J. M. Toner, of Washington, D. C., shows that in the United States and Territories there are 49,798 physicians; regular, 39,070; homœopathic, 2,961; eclectic, 2,860; hydropathic, 133; miscellaneous and unknown, 4,774. This gives for thirty-nine millions of population one physician to every thousand.——The Profession of Georgia are in a most bitter and unfortunate quarrel. Can any one give briefly the facts for publication? So far as can be ascertained here, the Faculty of the Atlanta Medical College are generally, and it appears justly, censured for their course.——The Belgian Government has disposed of the dead on its soil (in and around the battle-fields) by incremation.——The young editors of the "New York Medical Journal" will, it is hoped, be more modest, less meddlesome, more diffident, and less disposed to give unasked advice than they are at present. If not, they will become a part of the curiosities of New York.

## EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

### EDITORIAL BREVITIES.

It seems that foolish legislation in regard to medical science is to be found in high places as well as the lowest. As the result of congressional legislation, a homœopath is the Health

Officer of Washington city, and the physicians practising there have to report all cases of contagious as well as infectious diseases. Those who suffer from venereal, scabies, cutaneous diseases of various kinds, must have their cases reported; and measles, scarlet fever, pertussis, parotitis, are invested with an importaace fully equal to that accorded to variola, typhus, yellow fever, and cholera, etc. It is wonderful indeed that such absurdities are enacted in a civilized community, but it is strange that they should occur at the "Capital of the nation," where the people are taught to look for light and wisdom"—*tempora mutantur et nos mutamur cum illis!*———In Dr. Dickson's article, in the August number, a few unfortunate typographical errors occurred. *Sauterne* (the well-known wines), were termed *Santimes*; *opinion* was printed for *opium;* and alcohol was termed *good* instead of *food.* These errors are unfortunate, but not so much so as that of the printer who, in publishing the florid apostrophe of an enthusiastic believer in "the best government," termed the *United States* (by a transposition of two letters) the *Untied States.* The error demonstrated the folly of the orator painfully; presenting the truth, when he was but indulging in comical and foolish sentiment.———Drs. J. B. Hunter and William T. Lusk, the new editors of the "New York Medical Journal," are like Charles Lamb. When called upon to review any subject, they fear to know the evidence and the testimony, lest their opinion be "biased." Their condemnation of two recent editorials in this journal is comically similar to the recent ruling of a carpet-bag Texas Judge, who had written out his condemnation before he had heard the facts. The young Texan appealed to his people. He is now respected and supported at home, while the ignorant Judge, who had occupied his office recently and temporarily, has been ejected; ridiculed for his injustice and folly (*verbum sap*). The language these young editors fire off is fearful; it will be ruinous; at least to themselves. It reminds one of a young artillery recruit trying to send off a shell after blundering in preparing the fuse. The missile explodes, but the injury done is all at

home. Recruits should not be allowed to shoot until they have been some time under command. The company who own this field-piece, if they are not prepared to lose it, had better make a change in their gunners.———"The Clinic" is the title of a new *weekly* published in Cincinnati, Ohio. The editor is Dr. James T. Whittaker; one entirely competent. If the future numbers are as good as those so far seen, no mischievous editor will announce (by mistake, of course,) this publication as a *weekly*. The temptation to do so is strong, and Dr. Whittaker must render his best services to secure any one from such a manifest error.———Mr. Thomas J. Bryant, an accomplished teacher, has sent the editor a wonderful specimen of chirography. It represents the Family Record, a Prayer, and a Marriage Certificate. This triumph of the pen has been lithographed, and copies of it can be obtained by addressing Mr. Bryant at St. Joseph, Mo.———Those who desire a newspaper highly valuable and interesting, cannot do better than to send for the "Scientific American," New York. It costs but $3 annually; it is a large eight-page paper, handsomely illustrated, and always replete with articles of genuine scientific value and literary interest. This notice is given to benefit the reader as well as to aid one of the best papers published in any country.———The "Oregon Reporter" has been converted from a medical monthly into a quarterly. It is much improved in appearance and value, and really deserves support. It is suggested, however, that when reviews from the "Richmond and Louisville Medical Journal" are copied *verbatim*, it would be graceful to use quotation marks at least, even though the source of the review be not indicated. It is a small amenity, of course, but small amenities make up much of life, and add much to its value and happiness. This is written in kindness, and not in that churlish spirit of complaint which so often disgraces the Press.———The Faculty of the Savannah Medical College call attention to their climate as one of the inducements to students to attend lectures in their city. This is legitimate and proper, yet some shallow-pated carpers regard such a course

as unfair, ungenerous, and needing their august and fearful disapproval.——*The Largest Medical Monthly in America.*—The sight of this sentence, upon the cover of this Journal, seems to affect a few medical editors as did Mrs. Sqeer's sulphur and molasses affect the boys at the "Do-the-Boys-Hall." Their grimaces are ludicrous and fearful. Those who remember how poor Smike looked, in Cruikshank's famous picture of the molasses and sulphur scene, have a fair conception of the appearance of Drs. James B. Hunter and Alfred T. Lusk, the young editors of the "New York Medical Journal," as they recently appeared, when, upon being engaged, they first gazed upon this sentence, which so moves and convulses them. They censure this claim of the "Richmond and Louisville Medical Journal," and are evidently unwell on account of it. There is but one prescription for these gentlemen; it is to read the Scriptural lesson of the beam and the mote. The owners of the Journal which they are employed to edit, advertise it as "the largest and the best." The aggregate size of the two last numbers of the "New York Journal" is 224 pages; the size of these two numbers of this Journal is 233 pages. These editors are grievously troubled in regard to the just claim of another, but they seem serenely placid relative to the unjust claim of their own. As to their Journal being the *best*, such a claim would be in vile taste from any one, but from recent recruits, it is even more wonderful than ridiculous; and it is ridiculous beyond description. If the tail-end of the awkward squad at West Point were to claim to be better than the veterans in the field, they would probably have their heads shaved and be sent to the barrack hospital for treatment; yet their claim would be infinite modesty, when compared with that of two editors, who, not having had time as yet to master the primary elements of their business, claim (even with Journals edited by the veterans of ten years hard labor upon their tables) to be the editors of the "best monthly published." The Fairy who makes men see themselves as others see them, has evidently not yet visited these gentlemen, and cer-

tainly has before her a most stupendous undertaking.———*The Largest and Best Medical Monthly Published.*—The claim of Drs. Hunter and Lusk, the young editors of the "New York Medical Journal," to edit *the largest and best medical monthly published*, must revive in the memory of many the old anecdote told in connection with a New York steamer. She was advertised to be "the largest and best" in the field. Two simple-minded gentlemen believed the story, and became passengers. Soon it was found, after starting, that all the boats were passing her. Being near the engine-room, they remarked to the engineers that the boat did not sustain her boast. "Oh!" said the engineers, "that is the claim of the *owners*; it is not ours." "But," said the passengers, "how can you identify yourselves with such an evident piece of braggadocio?" The engineers here became serious, and then replied: "Well, gentlemen, you see the fact is, *we were out of a situation*, and we thought we had better take this place until we could do better. Our business, as long as we are employed, is to get up steam and blow it off. Don't you think now we do it pretty well?" "Yes," said the passengers, "we must say you do; but you blow off too much. If you were to blow off less and use more, your boat would not be left behind."———The "Boston Journal" makes a request that every one will reëcho; it is that publishers of medical periodicals will cut the leaves of their works. If they knew how often the best periodicals are thrown aside until a paper-knife is convenient, and so of course never read, they would not, as so many now do, tax the patience of their readers, and destroy the effect of their labors.———Dr. George D. Savage, of London, calls attention to the excellent results of "kneading" the bowels in obstinate constipation.———Dr. M. L. Bates, of Canaan, New York, reports the case of a child suffering from morbus coxarius, in whom enormous doses of morphia are tolerated. The child is but eight years of age, yet she takes one drachm of sulphate of morphia, in scruple doses, every twenty-four hours. Henceforth the experiences of De Quincey Coleridge, etc., will read like the most common-place

stories—"stale, flat, and unprofitable." Young America has become the champion opium-eater.———Cases of death from cancer, where cundurango was used, are becoming prominent and suggestive.———Frerichs, of Berlin, has had conferred upon him the order of the Iron Crown.———According to the "Journal of Psychological Medicine," a prominent lawyer of Venice died of pneumonia in December, 1869, nineteen and a half years after he had received a bullet in the brain in a duel occurring June, 1850. Memory and vision were temporarily disturbed, but he made from the effects of this wound an entire recovery. The ball entered above the right ear, and was found in the petrous portion of the temporal bone. This seems very wonderful, and it is, for Europe; but America, remarkable for everything remarkable, robs Venice of all her unique glory. She boasts of a Vermonter who lived twelve years and a half after a crow-bar, or tamping-iron, had passed through his head. The skull is now in the Warren Museum, at Boston. To be killed on the field of battle, and have one's name mis-spelled in the next morning's Gazette, has been the conventional estimate of glory, but satire must now pale before the truth. If one, with Pope, will ask "What is glory?" let him stand before the skull of this great Vermonter, and, with the patriotic pride of a grateful American, cry EUREKA.

*William R. Warner & Co.*—It is but seldom that the attention of readers is specially directed to advertisements, but it is a pleasure to refer them to the advertisement of this House. They are known to be manufacturers of experience and fidelity. They neither manufacture nor promote the sale of nostrums, and the composition of their preparations is definitely stated on the labels used.

They are in every respect worthy of the encouragement and support in the West and South that they have won in the East, and their preparations are receiving just confidence and support wherever they are used.

NOTE.—The "cuts" for Jaccoud's Lecture were not prepared in time.—ED.

THE RICHMOND AND LOUISVILLE

# MEDICAL JOURNAL.

VOL. XII. OCTOBER, 1871. No. 4.

## ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—OBSTRUCTIVE DYSMENORRHŒA. By C. B. NOTTINGHAM, M. D., Macon, Ga.

In this brief paper it is neither my purpose to attempt an exposition of all the pathological conditions that result in the production of painful menstruation nor suggest the various agents—medical and surgical—applicable to their relief. The more limited aim of inviting attention to one variety—the obstructive form of the disease that results either from congenital deficiency or subsequent abnormal contraction, without flexion of the calibre of the cervical canal in its transverse diameter, and the presentation of some views in regard to the safest and best method of affording relief—is all that I propose to do.

It is only during the last few years of the rapid and immense advancement of gynæcological science that this form of dysmenorrhœa has been properly appreciated by any considerable number of the Profession, and we are not without reason for believing that it is still much neglected by many physicians who are well informed on most professional subjects.

Although it was known to the Father of Medicine, and mention is made of it by some writer now and then all through the

long line of medical record, still it seems not to have found an abiding lodgment in the general professional mind of any age. Even so late as the first quarter of the present century, though finding plausible, practical, and successful exposition and illustration in the pen and practice of Dr. Mackintosh, of Edinburg, it appears to have attracted but little attention. Doubtless the memory of most of us of three or more decades of years of professional experience is charged with the painful recollection of cases of dysmenorrhœal suffering in which we indulged vague and unsatisfactory ideas of rheumatism, or neuralgia, or spinal irritation, or congestion, or inflammation, that not only proved totally irresponsive to the remedial agents and plans of treatment instituted, but were apparently aggravated thereby. If our observation of recent years, with the aid of the sound and speculum in the detection of the impediment existing in many like cases, and our experience with the knife and dilator in the relief of the source of obstruction be correct, there is but little—nay, no cause for doubting that some at least, possibly many of the cases that so puzzled and worried us in our earlier years, were dependent on a degree of narrowness of the canal that precluded the possibility of the free and easy egress of the catamenial fluid from the uterus, and would have been found readily amenable to appropriate treatment under the suggestions of a truthful diagnosis.

That this observation and experience is reliably correct, finds its confirmation not only in the almost unanimous and aggregated opinion of pathological inquirers in both this country and Europe, but also in the analogies of this morbid or abnormal condition of the uterine endo-tracheleum to a like condition of similar mucous passages in various other parts of the body. The œsophagus, the rectum, the urethra, are all mucous channels with underlying muscular structure, and are all occasionally found congenitally defective in calibre, in degrees of narrowness even to complete occlusion, as well as being the subjects of stricture—not spasmodic stricture only, but permanent—organic stricture from inflammation and its interstitial deposit. These

are and have been for a long while facts of general observation and assent. Why then should the canal running through the uterine neck be an exception to a condition occasionally found so universally in other passages of like organization? It is no exception, as is now established by the concurrent testimony of competent observers in both hemispheres.

Obstructive cervical narrowness, as met with in virgins, is usually congenital, though sometimes it is the result of inflammation from cold contracted during the flow of a catamenial visitation. In married persons it may be either congenital or the result of a lesion of labor or abortion, or the inflammation and ulceration of the canal, or the injudicious application of powerful cauteries for their relief. In the virgin it produces extreme dysmenorrhœal suffering, and in the married, like distress with sterility. The general health of its victims, if it is uncomplicated with associate disease, is usually good, of some even excellent; but however perfect their general health, they are doomed to suffer each time of the menstrual fluxion inexpressible agony before the flow makes its appearance, and for a short while at least subsequently thereto. The discharge is generally sparing in quantity, particularly during the first day or two, until indeed driving, expulsive pains shall have forced some expansion of the canal by hydraulic pressure, the fluid pressed down drop by drop into the outlet, doubtless serving after a time to promote slight dilatation. Hypogastric and pelvic pain is sometimes equal to that of labor, and often produces reäctionary symptoms that are manifested by nausea and vomiting, small, rapid pulse, and cold, clammy perspiration, with a sad train of nervous phenomena occasionally evinced in the disorders of delirium and convulsions.

The differential diagnosis of this form of dysmenorrhœa is usually one of difficulty, and requires for its reliability physical exploration with instruments. Most of the general symptoms are so analogous to those characterizing some of the other varieties of the malady that none of them can be relied on as conclusive. It is true that the pain of this form appears to be

somewhat different from that which obtains in most of the other varieties, it usually being of a more remittent or paroxysmal character. It indeed resembles very much the pain of abortion or that produced by a retained clot, but it is not sufficiently characteristic to be relied on further than to raise a reasonable presumption of its nature. For satisfactory elucidation, the digital touch and uterine sound, aided sometimes by the speculum, are imperatively demanded.

To the touch the cervix is usually very firm and conoidal, or filbert-like in shape, and if the constriction exists in the lower segment of the canal the os tincæ is barely appreciable. To vision through the speculum it is only perceptible, and will not, under the most careful and painstaking manipulation, admit of the introduction of a sound of ordinary size.

Whilst this, the lower portion of it, is often the seat of the contraction, particularly in cases that follow labor, abortion or ulceration, and its maltreatment, still it may occur at any point in the entire length of the canal, and probably is most frequently encountered at the internal os, which naturally is its narrowest portion. Here it is surely of most frequent occurrence in virgins, and in all those who have not borne children or suffered from mechanical violence of any kind. Existing at this point or in the middle portion, neither the touch nor the eye can elicit any information, and it can only be detected by exploration with the sound or other probe, which will be arrested after it shall have penetrated the cervix to the point of constriction. Although of rare occurrence, still cases are sometimes met with in which the whole channel is greatly narrowed of its usual proportions, as will be demonstrated by the tightness with which a probe of very small size will be clasped in its entire transit from the external os to its entrance into the body of the uterus.

The proximate cause being mechanical, anodynes and narcotics may afford some degree of temporary relief to the distress of the recurring periods, but emenagogues are totally worthless at all times, and cure can only be predicated of surgical means.

Among those who have spent much time and thought on the best methods of cure, there appears to be two distinct schools or classes, each of which recommends a distinct plan of treatment, the one advocating incision, and the other relying entirely, so far as surgical means are concerned, on dilatation. The objective point of both is one and the same—viz., the securing of a passage of sufficient calibre to admit of the ready and easy discharge of the fluid as it collects in the uterus.

From ten to twenty years ago, in the first flush of unexampled gynæcological progress and triumph, when the art was more slashing than now, the advocates of the knife were numerous, bold and fearless in its recommendation and application. At the present time, however, since the impulsive ardor of that period has somewhat toned down, the knife seems to have grown into decided disfavor with some, and is probably more sparingly used by all, whilst dilators have become more generally popular than at any former time.

To me the knife has ever appeared amenable to objections that are plausible, valid and grave. If the cutting be by linear incision of the membrane that lines the canal, it is not likely to be of the least service unless it is followed by a systematic course of dilatation, as the divided surfaces would be sure immediately to unite; and if the requisite subsequent dilatation be instituted, the tendency to contraction under the process of cicatrization, even to narrowness of the canal that did not originally exist, is so strong that more persistent and protracted dilatation to secure a permanent given calibre of passage is probably called for than would have been requisite had the knife not been used in the beginning. This manifest disposition to contraction during cicatrization in wounds of all the soft parts of the body is a matter of daily observation, and is in obedience to a physiological law of reparation to which I know of no exception.

But if the more bold operation of slitting open on each side the walls of the cervix down to the vaginal junction, with the addition of nicks or linear incisions of the internal os be adopted,

more grave objections, more serious evils obtain. As results of this procedure, severe hæmorrhage, metritis, septicæmia, cellulitis, and pelvic abscess, either of which greatly endangers the life of the patient, are all of occasional occurrence; and should she have the good fortune to escape these several immediate and terrible misfortunes, it has been found in the field of observation of competent and trustworthy observers that she has fastened on her an apt liability to abortion at the period of quickening, or soon thereafter, should she become pregnant at any time subsequent to the operation.

Objections so grave, evils of such magnitude, could not fail to be powerfully operative in turning the professional mind to a more safe and generally equally efficacious mode of dealing with the obstruction.

To dilatation cautiously, prudently, and patiently prosecuted, but few, if any, of these evils apply. It is true, the literature of the subject presents us with a sad recital of some untoward consequences having followed this method of cure in a few cases; but in view of the anatomical fitness of the canal for expansion, and with my own experience of its perfect safety, it would be difficult for me to believe otherwise than that the unfortunate cases reported by others must have resulted not from danger inherent in the operation, but from the manner—as to instrument and rapidity—of performing it, or from the circumstance that associate disease complicated the conditions for which the operation was performed. The only unpleasant consequences ever observed in my own practice have been, in rare instances, nervous shock manifested in temporary faintness, rigors and nausea that readily yielded to stimulants and anodynes. It is quite possible that an attempt to dilate the channel when acutely inflamed, or very rapid dilatation with hard, unyielding metallic instruments when it is not inflamed, may be attended with danger of lighting up new or promoting the extension of already existing inflammatory action even to the extent of begetting suppurative disorganization.

If practicable, any existing inflammation should be subdued

by appropriate treatment before an attempt at expansion is made; and when the process is instituted the dilatation will be likely to inflict much less violence if it is effected by the patient and gentle introduction of dilators that are slightly compressible in their composition, than if secured by the rapid and forcible push of unyielding metallic instruments that contuse and crush, to some extent, the neighboring tissues. Labor-saving or time-economizing views should never be allowed to influence the medical man whilst engaged in the several steps of this operation.

For the purpose of dilatation numerous instruments have been devised, especially within the last few years, by different practitioners who have given the procedure special thought and attention; but it was my fortune many years ago to be compelled to use the gum bougie, and I have never had cause to be dissatisfied with it. It is true, it may require more time to accomplish with it the end sought than would be necessary with some of the metallic instruments of recent introduction, a circumstance that probably accounts in part for its greater safety, but it has proven eminently successful and satisfactory, and I continue to use it.

A set of good bougies running from one to ten inclusive, stiffened, steadied, and properly curved with wires appropriate to each number—*that is*, not exactly filling its bore—with a guiding line of white paint or a thread encircling them at a point sufficiently distant from their ends to allow of their passing just through the internal os are adequate to the purpose, except in cases of extreme narrowness of the channel—such as will not admit of the passage of a No. 1 instrument—when a small-sized, flexible, silver probe may be necessary. In these cases the introduction of the probe is often attended with great difficulty, and requires much patience. But, when it and the first bougie have been successfully passed, instruments of increased calibre to the extent of two or three numbers usually may be introduced with but little trouble at the first sitting. Each instrument should be allowed to remain ten or twelve

minutes, and if the last one passed at the sitting be permitted to remain two or three hours it will accomplish increased good. The first effort at dilatation is usually made a few days—say, two or three—subsequent to menstruation, and is prosecuted with instruments of larger size every four or five days until the purpose is effected, which is often done by the time of the next menstrual period. Extreme firmness of the neck may render the process more tedious, when another month may be required. It matters not, however, how complete and thorough the expansion may be, there is generally a disposition to recontraction that can only be certainly prevented by the introduction of a bougie of good size just before each periodical visitation for several months. When pregnancy speedily supervenes these subsequent dilatations are neither necessary nor proper; gestation and labor prevent any return of abnormal contraction in most instances.

The gum bougie, well oiled, passes as readily as a metallic instrument; indeed, if the canal be at all tortuous, more easily; and as it is slightly yielding in its texture, it is by no means so likely to bruise and crush the proximate tissues. In some cases it may be successfully introduced by the touch—the patient being on her back with her knees drawn up; but often it is necessary to place her on her side, introduce Sims's speculum, gently draw down and steady the cervix with a tenaculum, and thereby have the aid of vision.

The method is safe, and is usually attended by the most successful and happy results. It gives but little pain, and scarcely interferes at all with the social pleasures or the duties of domestic life—a few hours' repose in bed after each operation being the only confinement that is called for.

Again, it is so free from danger and so easy of accomplishment—so marked in these particulars when compared with some of the cutting methods of dealing with the conditions of the endotracheleum, that I have endeavored to sketch briefly this interference of art, that it may be popularized as a procedure of which physicians generally are capable. This circumstance,

I conceive, is worthy of much consideration when we reflect on the inconvenience and discomfort of travel to some, and more especially when we reckon the want of means on the part of many requiring relief to go to distant points for the purpose of commanding the services of specialists and famed experts.

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ART. II.—VARIETIES OF THE PULSE. By CHARLES W. CHANCELLOR, M. D., Professor of Anatomy in the Washington University (Medical School), Baltimore, Md.

The phenomenon called the pulse is inseparable from life in the warm-blooded animals, except in the hybernating during their state of torpor; it exists also in the more perfect of the cold-blooded animals.

In viewing man we observe, independently of any particular anatomical knowledge, a symmetry of form, a gracefulness of motion, and an expression of life and intelligence admirably calculated to attract our attention; and if we were not liable to various accidents and diseases, which cause us to suffer and to die, there would be little inducement to enter further into the study of the human organism. What was probably undertaken, therefore, from feelings of necessity, growing out of the frailties of our structure, has now become so interesting that no organ or function can be examined without exciting admiration, and a desire to know more of the phenomena of animal life.

The researches of two thousand years have served only to excite our curiosity; and though much has been done, we are probably but at the threshold of physiology. We must not, however, forget that through a long course of dark ages nothing was added to physiology, and as nothing like science could be introduced into this department of philosophy until the discovery of the circulation of the blood, it is evident that this science but dawned with the discovery of Harvey at the beginning of the seventeenth century.

We are now perfectly familiar with what is properly termed the circulation—we know that it is only necessary for the venous blood to enter the right auricle of the heart to commence its suit of actions, which shall succeed each other in the healthy state with unerring regularity. The auricle contracting, throws the blood into the corresponding ventricle; it is then forced into the lungs through the pulmonary arteries, returned by the veins to the left auricle and ventricle into the aorta, and thence distributed to the capillaries.

Although it is obvious that there must be a regular correspondence of action between the auricles and ventricles, and although there is an association and concentration of actions in a state of health, still we may readily perceive that in addition to the disturbance which may arise in the heart by a want of proportion between the sensorial principle and the stimulus of the blood, there may be diseased action from want of proportion as to time, or force, or sensibility, in the moving apparatus of the different cavities. The power of the ventricles may not exactly correspond with that of the auricles, or that of one ventricle with the other ventricle, etc.

After all, so far as we can discover variations in the pulse, they depend in a great measure upon the more or less regularity or perfection with which the left ventricle performs its office.

There has been considerable diversity of opinion among medical writers respecting the pulse, both as to the best arrangement of its varieties and as to the amount of knowledge to be obtained by an examination of the subject. Some have held the opinion that we cannot discriminate with sufficient certainty between one pulse and another, except as to frequency and force. Of this opinion the celebrated John Hunter, in his Treatise on the Blood, page 318, makes this remark: That "frequency of pulsation in a given time is measurable by instruments; smartness or quickness in the stroke, with a pause, is measurable by the touch; but the nicer peculiarities in the pulse are only sensations in the mind." He continues: "I have been certain of the pulse having a disagreeable jar in it when others did

not perceive it; when they were only sensible of its frequency and strength; and it is perhaps this jar that is the specific distinction between constitutional disease or irritation and health. Frequency of pulsation may often arise from stimulus, but the stroke will then be soft, yet softness is not to be depended on as a mark of health. It is often a sign of dissolution, but then there must be other attending symptoms."

What Mr. Hunter calls a "jar," Dr. Rush terms a "jerk." No writer has obtained more universal credit for veracity than Dr. Rush, and he says, speaking of the peculiarity of the pulse in the fever of 1793, that he thought he could have distinguished the disease by it without seeing the patient. "This pulse," he says, "attended cases of remittents produced that year by the same causes as yellow fever, and often occurred in persons who were able to go about."

All the well-marked varieties of the pulse may be included in the full, tense, slow, frequent, quick, soft, irregular, and feeble.

*The Full Pulse* is common in phlegmonous inflammations, in inflammations of the pleura, and in acute exanthemata. In these cases, particularly in the athletic, it is also tense, and generally somewhat frequent. In some cases of extreme debility from exhaustion by hæmorrhage, or disease, the pulse is full, mostly frequent, and very yielding or soft. This condition has been termed the compressible pulse.

*The Tense Pulse*, or the hard pulse, we have seen sometimes attend the full pulse, but tension of the arterial coats indicates more danger when the vessel is small and very tense, not because there is a reduced quantity of blood, but because we know by actual observation that this state of the pulse indicates severe disease of some important vital organ. A tense pulse can, under no circumstances, be indicative of anything salutary. It has been remarked by Dr. Rush and others that this pulse is almost always present at the onset of malignant fevers, and this same author tells us that "in some cases the tense and full pulse were present in the last hours of life." A degree of ten-

sion of the artery at the wrist, though considerably above the healthy standard, does not particularly indicate danger; but great tension with remarkable slowness, or great tension with extreme frequency, are almost always ominous of danger.

*The Slow Pulse*, when remarkable in acute disease, is perhaps always indicative of danger. It should be remembered that instances of slow pulse occur as idiosyncrasies of habit, or it may be that there are intermediate strokes too feeble to be perceived. In an illness where the pulse suddenly becomes slow from being feverishly quick, with an aggravation of other symptoms, it is an indication of the disease being translated to the brain; or if the pulse of a child be fifteen or twenty below the lowest limit of the natural standard, it may be regarded as a certain indication of the brain being affected. In injuries about the head, too, the slow pulse indicates cerebral complication. A case came under my observation a short time since illustrative of this fact. A lad, twelve years old, received in a fall a slight blow upon the left parietal boss, from which he experienced no particular inconvenience at the time, but in a few minutes he complained of headache and confused vision. There was no mark of violence upon the scalp, nor of injury to the cranium, but the boy's pulse was only *forty* beats to the minute. This, in itself, was sufficient to awaken a suspicion that "shock" had been communicated to the nervous system, and a course of treatment to meet the indications was adopted. In ten or fifteen minutes thereafter vomiting ensued, the surface became pale and cold, the pupils were widely dilated, and the sufferer passed into a condition of semi-consciousness, with all the objective and subjective indications of concussion. Now, in this instance, the slow pulse was the first, and for some time the only diagnostic sign of cerebral complication, and was in itself sufficient to point out the nature of the injury.

*The Frequent Pulse* does not particularly indicate danger, unless above 120. When upwards, in acute fevers, the patient will generally be delirious, except in hectic. In rheumatism the pulse will frequently beat upwards of 120 without indicating

danger, but a pulse upwards of 120 is said to be almost always a fatal omen in asthma. Authors speak of seeing patients recover whose pulse had been 180. This pre-supposes the possibility of counting 180 beats per minute, which can seldom be done; indeed, where there is extreme frequency we cannot easily count above 140.

*The Quick Pulse.*—The heart is so easily thrown into irregular action in diseases that nothing is more reasonable than the supposition that it may perform its systolic action in less time than natural, and it is doubtful whether we obtain any advantage from endeavoring to estimate the quickness of the pulse. The difference between the frequent and quick pulse is readily demonstrated, notwithstanding many use these terms as synonymous; the former takes cognizance of the number of beats in a given time, say one minute, the other has relation to the time of contraction of the left ventricle of the heart and the muscular tunic of the artery. Dr. Rush expressly tells us that in the epidemic of 1793 the pulse was both frequent and quick in many instances; and this peculiarity has also been recognized by Good and other authors.

*The Soft Pulse.*—This state of the pulse is, perhaps, never indicative of danger, except in cases of extreme debility; and here the danger is manifested as much by the frequency as by its softness, or rather weakness; when it attends dissolution it is usually under those circumstances. Generally this pulse is the harbinger of returning health; nothing is more acceptable to the experienced physician or surgeon after a state of morbid excitement, from whatever cause, than a soft, equable pulse. In short, it is almost uniformly the pulse of convalescents, but here it is mostly equable.

There is, however, a soft pulse, with very considerable dilatation of the arteries, which sometimes attends a great and sudden degree of exhaustion. This peculiarity is seen where much blood has been lost by hæmorrhage. The blood, in these cases, is greatly weakened in its texture; it contains very little plasma or red corpuscles, being principally serum, which will scarcely stain a linen rag.

*The Irregular Pulse* is often seen in malignant fevers and in violent injuries of the viscera, especially the liver; the heart and arteries hobble, as it were, through their functions. This pulse also attends rheumatic diseases, without, however, portending danger; but in malignant fevers or injuries of the viscera it may be regarded as an unfavorable, if not dangerous symptom.

*The Feeble Pulse* is often associated with other states of the pulse. In protracted diseases generally a feeble stroke of the artery will take place. In typhus fever it is a distinguishing symptom, which occurs very early in the disease, and is persistent, whereas in hectic fever it changes with the paroxysms, the pulse being at one time of the day tense, and at another extremely feeble, and it is not till a protracted period that the feebleness predominates.

There are other states of the pulse noticed by different writers, which, however, are without any well-grounded meaning or utility. Sir A. Cooper speaks of an "oppressive state of the pulse"; Dr. Darwin of an "empty pulse"; Dr. Rush of a "shattered or quill pulse." Others have spoken of a "laboring pulse," a "breathing pulse," a "thready pulse," but all these may properly be referred to the foregoing heads.

Lastly, there are instances in which the radial artery in one arm presents abnormities which might lead to error in diagnosis; it will, therefore, be well, at least with strangers, to examine both arms, as other peculiarities may be met with of which patients may be insensible.

Celsus, who was ignorant of the circulation of the blood, characterized the pulse as a *res fallassisima;* but since the brilliant discovery of Harvey its value as a diagnostic means has been universally recognized, and as we become more conversant with the laws or principles by which organs so curious are enabled to preserve their own existence and perform certain functions individually and in unison, the pulse will become more and more a subject of interest and investigation.

ART. III.—CHLORIDE OF PROPYLAMIN. By A. N. TALLEY, M. D., Professor of Practice of Medicine in University of South Carolina, Columbia, S. C.

My attention was first called to this compound by Dr. J. A. Mayes, of Sumter, S. C., who informed me that he had employed it successfully in the treatment of neuralgia. This statement, which I found coincided with the published experience of Dr. Eaton, of Vermont, suggested to me to make trial of its virtues. As the results of my observations may prompt to further investigation of this subject, I submit them to the public.

The first subjects of experiment, six in number, were habitual sufferers from cephalalgia, nervous headache, as they termed it. Of these two were entirely relieved, one after the second dose, the other after the third; two had their paroxysms diminished in intensity of duration; and two received no appreciable benefit from the treatment.

The formula employed by me is as follows:

℞.—Propylami Chlorid, ℥ss.;
Sacchari, ℥ii.;
Aquæ, Menth. Pip., ℥iv. M.

Sig.—A tablespoonful every hour till relieved.

Since the trial just referred to I have prescribed it frequently, and in all the forms of neuralgia which have come under my care, and with results substantially the same as those above recorded. The remedy was usually discontinued with the termination of the attack, and was not again resumed unless a return of pain indicated a necessity for its use.

Quite recently I have extended the area of its application, giving it in rheumatism, gout, asthma, whooping-cough, and menorrhagia. Four cases of acute articular rheumatism, epitomized from my case-book, present the following results; in two the violence of the disease had undergone notable abatement in forty-eight hours, and convalescence was established on the fourth and sixth days respectively; in one of the remaining cases the treatment was supplemented by the nightly exhibition of muriate of morphia to relieve pain and promote sleep,

which the propylamin alone had failed to afford. This case was dismissed on the tenth day. The fourth underwent no improvement, and the remedy was accordingly abandoned on the tenth day for the usual alkaline treatment.

I have given it in but one case of clearly defined gout, yet the result in that one encourages me to hope that it will prove a valuable agent in the cure of that distressing malady.

Two cases of asthma were promptly relieved by it, one of them having more or less successfully resisted chloroform, ether, morphia, cannabis-indica, and belladonna successively, and in various combinations. In this latter case my patient, a highly intelligent lady, who had been, in some of her attacks, under the care of distinguished physicians, expressed great delight at the relief afforded by this, to her, novel remedy. The other case, to which reference is had, was of more recent date, and milder in its symptoms.

Of the capacity of chloride of propylamin to excite uterine action, my opinion rests upon observations made in a single case, but the evidences of uterine contraction in that case were unmistakable.

The occasion was one of uterine inertia occurring in the first stage of labor at term. Since that time, only a few weeks ago, no opportunity has been afforded me for repeating the experiment. In menorrhagia I have repeatedly prescribed it, and generally with success. When administering this remedy, except in acute neuralgic affections, in which I adhere to the formula already given, the interval is increased to two, three or four hours between the doses, as the circumstances of the case may warrant. Its hypodermic use I have on three occasions tried, using for that purpose one grain of the aqueous solution at a time, but cannot claim for it any special advantage over the ordinary manner of administering it. Indeed, the last case was followed by an abscess, which caused me to be a little timid in its use in this way. This accident may have arisen from the failure to dissolve completely the propylamin before injecting it,

while the absence of more definite and remedial results may be due to the use of the drug in insufficient quantity.

In seeking to bring to the notice of the Profession at large the therapeutic uses of chloride of propylamin, I prefer no claim to the merit of discovery, and am, therefore, free from that bias which too often gives complexion not only to the opinions, but also to the observations of the proposer of a new remedy. My purpose is fully met if I can awaken the interest of medical men in the subject.

Propylamin, says the United States Dispensatory, exists in petroleum, in cod-liver oil, in herring pickle; it is found, too, in ergot, in opium, and in several other articles of the vegetable kingdom. The chloride of this hydrocarbonaceous compound does not seem so well known to the public, though I am informed that it has been used in the treatment of rheumatism in the Pennsylvania Hospital. This substance, as obtained from the manufacturing chemists, is a white, inodorous, non-deliquescent powder, readily soluble in water. It possesses a strongly saline though not otherwise disagreeable taste, which, however, may be disguised by any aromatic vehicle, as peppermint or orange-flower water, to which a little sugar has been added. As the solution is partially decomposed by metallic substances, it might be desirable to supersede the tablespoonful by a porcelain or glass vessel of equal capacity. The specimens used by me were obtained of Powers & Weightman, of Philadelphia, and were seemingly of uniform strength and purity.

In the present state of medical knowledge any opinion of the physiological action of this substance must be regarded hypothetical.

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ART. IV.—PERVERTED PERISTALTIC ACTION. By G. PINKNEY WILSON, Zion, Henderson County, Ky.

I am induced to make a report of this case because of one feature, which might not be altogether uninteresting to some of

the Profession. I refer to a mode of retroverting perverted peristaltic action of the alimentary canal.

The patient was aged sixty years, with constitution very much enfeebled. I was summoned to see him forty-eight hours after the attack, and found him laboring under aggravated symptoms of indigestion, constipation, acidity of the stomach, enteralgia, stercoraceous vomiting, with inability to exercise any dejectory efforts. Through the whole course of the disease there was no tendency to febrile development.

As the stomach had been evacuated by repeated emesis, the treatment was commenced by administering ten grs. hydr. protochloridum, which was followed at the ordinary intervals with mag. sulph., ol. ricini, and other brisk purgatives. At the expiration of twenty-four hours the same quantity of mercury was repeated, and the subsequent treatment of the previous day continued. In addition to the remedies administered by the mouth, copious stimulating enemata were frequently repeated. Forty-eight hours had elapsed with no amelioration, but conversely the patient was now very much exhausted, and rapidly growing worse. Though stercoraceous matter was no longer ejected by the mouth, and no obstruction of the bowels appeared to exist, distressing emesis and retching continued. At this stage the matter consisted of the injections administered per rectum.

I was now convinced that, to have any promise of a successful termination of the case, a change of treatment was demanded. I was eventually impelled to the conclusion that the most expeditious way of retroverting the peristaltic action would be to produce an energetic and specific impression on the lower extremity of the bowel, that an impression could be made there with more facility, and that its influence would be more readily and more efficaciously communicated to other portions of its tract than if made at intermediate points.

Accordingly I administered, through a rectal tube, an enema consisting of two grains of podophyllin dissolved in four ounces of a warm solution of starch. In three hours

slight symptoms of tenesmus were produced, which, of necessity, reëstablished the downward and expulsory efforts of the abdominal muscles. Nausea and vomiting had ceased; hence I ordered one-eighth of a grain of podophyllin to be given, by the mouth, every two hours. Very soon alvine dejections were produced; at first scanty, but subsequently free. As there was no fæcal matter in the bowels, the evacuations were necessarily watery—they were tinged with bilious matter. The patient expressed great relief. No further medication was advised, and convalescence progressed uninterruptedly.

It will be observed that as soon as a decided impression was made on the lower extremity of the bowel its perverted action was placed in check, and that soon the intestinal wave resumed its normal course. The remedy selected to produce this impression is a very energetic one, and the system of treatment can scarcely be considered other than harsh; but in this case, as frequently occurs, it was the least of two evils. All who have made use of the preparations of podophyllin peltatum are doubtless familiar with its potency and its specific action on the rectum and colon. Though drastic, its action is nevertheless easily controlled.

In similar cases the manner of administering this drug or any of its class should be a matter of some consideration. The difficulties encountered with a refractory stomach and its vitiated secretions renders the procedure of giving medicine by the mouth a very unsatisfactory one. When administered by the rectum they are liable to act as local irritants; therefore, when practicable, it is infinitely preferable to introduce them hypodermically. The concentrated tinct. of podophyllin peltatum, with proper dilution, can be applied in this way. Having no alternative, I was compelled to make use of the podophyllin, the resinoid principle of which is too tardily taken up by the lower bowels to render it an eligible remedy to be administered by the rectum.

## ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—AMPUTATION AT THE HIP-JOINT, COMPLICATED BY COMPLETE ANKYLOSIS—DEATH IN TWENTY-FIVE HOURS. By PAUL F. EVE, M. D., Nashville, Tenn. Read before the State Medical Society, April 1871.

William Bergin, thirty-six years of age, born in Baltimore, of Irish parentage, and of good moral character, received an injury in the left hip, when about ten years old, by catching the foot of that side, while on horseback, in shutting a gate through which he was passing. This was of so grave a character that he was confined two years. A short time after this, in driving a cart containing loose drills for blasting rock, the horse became frightened at their rattling, ran away, threw him out, and he was picked up, six hours afterwards, in an insensible condition. He yet sustained a third hurt in the hip by being thrown down a stairway when at school.

The late Prof. Porter treated this case five years, and the patient wore a seton over the inflamed hip-joint for a long period. Dr. Carow was also his surgeon, as were Drs. Briggs and Buist more recently. In the meantime the thigh-bone, below the trochanters, became carious, and the joint above permanently ankylosed. Altogether, our patient had been a sufferer for eighteen years—half his life; and latterly several pieces of bone were discharged through the sinuses leading into the cancellated structure of the femur.

When invited to see him, last December, by Dr. Buist, there were several issues on the outer and internal upper surface of the thigh, discharging pus, and cicatrices of former incisions and ulcers. During this month, assisted by the last-named gentleman and Dr. Briggs, the diseased bone was exposed again, by the knife, when it was found extensively carious, one opening

admitting the tip of the finger; and amputation at the hip-joint proposed, as had been insisted upon sometime previous to this examination, by Dr. Briggs.

Our patient, after considering the proposition of about one chance in four to save his life by amputation, declared he would rather die than pass another summer of worse than uselessness to himself and a burden to his friends, finally decided for the operation. This was performed on the 4th of March, at 11 o'clock A. M., assisted by Drs. Buist, Briggs, Buchanan, Dow, of Alabama; and Drs. Compton, Peyton, Noel, Bailey, and Summers, of this city.

Dupuytren's compressor was tried upon the abdominal aorta, but did not answer well, and Dr. Briggs prevented hæmorrhage by pressure on the femoral artery, over the pubis. A long anterior flap was made by transfixion, after the integuments had been dissected up with a scalpel; ligatures were applied to the bleeding vessels, then the shorter flap cut posteriorly from within out, and the femur sawed at the trochanters. Several large sinuses were laid open, the soft tissues found much altered, and the muscular structure quite lardaceous. With chisel, gouge, and hammer, the head of this bone was now excavated from the acetabulum. No capsular or round ligament was recognized. The ankylosis was perfect, with scarce a trace of cartilage or line of demarcation between the two opposing surfaces, so completely had they coälesced. Nevertheless, in using the gouge, pus issued from the caput femoris.

The operation consumed about forty minutes, and but little blood was lost—probably four ounces, as estimated by Dr. Buist. The great distress after this, and which, unfortunately, continued to his death, was nausea, and vomiting of everything the patient would swallow. Ice, iced champagne, brandy, lime-water with milk, mustard-plasters, etc., were all tried in vain. Twenty grains of calomel, taken half an hour before he died, alone remained, though he took nothing after it but crushed ice.

Reäction came on slowly, but after two hours he revived;

slept well at intervals during the night; and conversed cheerfully up to 5 o'clock the next morning. He took laudanum several times, which was vomited very speedily, and only one-fourth of a grain of morphine was hypodermically inserted in two (one-eighth) portions. Up to this hour I had remained with the patient.

Returning at 8 o'clock, I found him sinking, and becoming unconscious. Stimulating and nutritive enemata were vigorously employed, and mustard was again resorted to on the surface, but to no purpose, the patient dying from exhaustion about 1 o'clock, twenty-five hours after the operation.

This may be the first case wherein amputation was performed, complicated by ankylosis in the joint; notwithstanding which, I was somewhat surprised at the ease with which it was done. As far as I have examined the subject, none similar has been found, but my means for research are limited. I had never seen it performed before, for I was in Europe in 1859, when my late colleague, Dr. Buchanan, operated in the Hospital of Nashville, on a lad of fourteen years, and so successfully, too, that the patient is now serving out his second term in the penitentiary for his rascality. Mine is probably the second coxo-femoral disarticulation made in Tennessee, excepting those performed during the war, concerning which, we have failed to obtain satisfactory details.

Within the past quarter of a century operations at the hip have been invested with an increased interest, and a new starting-point created for it, as it were, by the six recent disastrous wars viz., of Schleswig-Holstein, the Crimean, the Italian, the war of the American States, the Prussio-Austrian, and the Franco-Prussian. This has emphatically been the period of terrible gunshot injuries, inflicted, too, by new projectiles of fearful momentum, so that a greater number of these amputations and resections have been performed during the last twenty years than in the previous history of the world. A few months of repose now, with the benign influences of peace, would no doubt result in much good to the Profession, and consequently to

humanity, by a collection and analysis of the numerous facts connected with surgery, educed by late political events. It is to military surgeons that we look for the most reliable reports, as they alone have access to those which are official; and, fortunately for the Profession, the activity and efficiency displayed in the Surgeon General's Office guarantees that the work will be well done. Statistics, carefully prepared, can alone settle the several points bearing on the interference or non-interference in so grave a question as the quartering of a man to save his life.

Amputation at the hip-joint, or coxo-femoral disarticulation, systematized and made practical, is a modern operation, and has very recently been made safer by the employment of anæsthetics and the use of the abdominal tourniquet; its great fatality being due to shock and loss of blood.

In a brief historical notice of this formidable operation, in my work on Remarkable Cases in Surgery, published in 1857, it was stated that Morand first suggested this amputation in 1743; Ravaton actually proposed to perform it soon after, but was overruled in consultation; and Lacroix, of Orleans, France, in 1748, first removed the thigh, at the hip, from a boy of thirteen or fourteen years, laboring under gangrene from ergotism, by dividing with scissors the round ligament and sciatic nerve on one side, and the other with the saw, just below the trochanters—the patient living fifteen days. But in this case, as in the one which occurred to Perrault, of St. Marie, Tourraine, in 1773, in which a man had his thigh crushed between the pole of a carriage and a wall, followed by inflammation and sloughing nearly up to the pelvis, these surgeons, in their operations, did little else than cut through mortified tissue. In the latter instance the patient lived for years, and Velpeau, in 1815, conversed with his son about the father's case. These operations, however, as has been properly remarked, only simulated that now considered amputation at the hip-joint, and it is not, therefore, strictly or scientifically true to assert that this latter instance was the first successful one of the kind.

The first regular coxo-femoral disarticulation was probably made by Kerr, of Northampton, England, in 1774, and was for hip-joint disease, or coxalgia, on a little consumptive girl, who lived to the eighteenth day after it. This, or a similar operation, was condemned by the celebrated Percival Pott at the time, for the acetabalum and os innominatum were found carious to a considerable extent; but, nevertheless, it was this very case which established the important fact, that death does not necessarily or promptly follow its performance; and moreover, in less than three-quarters of a century this identical operation, and for the very same disease, was performed in our own country successfully.

As is now well known, Dr. Washington Duffy, of Philadelphia, Pennsylvania, in 1840, amputated at the hip-joint in a colored girl, then six years old, who, when grown to womanhood, was safely delivered of a child, in the Blockley Almshouse of that city, in 1857. It is expressly stated, too, that the hip-bone was involved in the affection.

In military surgery, Baron Larrey (senior) became the active advocate for this operation at the close of the last and the beginning of the present centuries. He himself was the first to perform it, in 1793; did it several times, and had a success in 1812 at the battle of Mozaish. Brownrigg, of the British Army, is credited with the first successful case, in 1812, in a patient wounded the year before in Spain; then came Larrey's case, the latter part of the same year; and Mr. Guthrie's, at Waterloo in 1815, on a French captive, upon whom he operated "soon after the receipt of the injury." This is his own language; yet it is now believed he did not operate until the 18th, three days after that battle; it is not therefore considered a primary amputation.

In civil practice it may be that Dr. Walter Brashear, of Bardstown, Kentucky, in 1806, had the first success in amputation at the hip.

The propriety of adding an *intermediate* period between the primary and secondary—that is, putting all operations performed

during active inflammation in a distinct category, first proposed by army surgeons, has been made more obvious by the coxo-femoral disarticulations; for while we may operate immediately with a fair prospect of success for almost any injury done the extremities at any other point, experience has already taught us that in those involving the hip-joint temporization gives the best result. Still, this may be carried too far, and in my case the delay was probably so great as to have aggravated the serious complication with bony ankylosis. It is undoubtedly, too, to procrastination, as well as the preparation of the system by the previous operation in the continuity of the thigh, that reämputation at the hip has been comparatively so successful.

It will be seen from this brief historical notice of amputation at the coxo-femoral articulation, and by what now follows, that our own countrymen have done something to establish it as a regular operation in surgery.

Dr. Brashear, of Kentucky, was probably the first to succeed with it in civil practice; it may be his case was the very first successful one under any circumstances.

Dr. Duffy, of Pennsylvania, was certainly the first who succeeded with it in coxalgia.

Others have succeeded by exsection of the head of the thigh-bone.

Mr. Erichsen asserts in his excellent work on the Science and Art of Surgery, edition of 1869, that previous to our late war there was no instance of recovery under primary coxo-femoral disarticulation; and as late as 1861 Baron Larrey (junior) and Mr. Legouest declared that there was not an authenticated case of successful primary amputation at the hip recorded in military surgery. Not one of those operated on during the Schleswig-Holstein, Crimean, or Italian wars, whether by German, English, French, Italian, or Russian surgeons, survived an immediate coxo-femoral disarticulation; but during the war between the States there were three instances of recovery after primary amputation—viz., by Dr. Compton, of Holly Springs, Mississippi, who operated within an hour after his patient was

shot; Dr. Gilmore, now of Mobile, Alabama, in three hours; and Dr. Shippen, of Philadelphia, five hours after the wound was received. Two of these three most remarkable cases, and the first of the kind ever reported, were furnished by me in 1867 to the Office of the Surgeon General, U. S. Army.

The late Dr. Buchanan saved the first patient operated on in Tennessee.

The first three hip-joint amputations made in Philadelphia by Drs. Duffy, Pancoast, and Gross, were successful; of the first nine cases, seven were successes, the two fatal ones occuring to the same operator; and of the eleven operations altogether performed in that city, seven recovered. The distinguished professors of anatomy and surgery of the Jefferson Medical College have each saved their two patients, being a success unprecedented.

Mr. Lister, Professor of Surgery in Edinburgh, acknowledges, in Holmes's last edition, that he received his idea of the abdominal tourniquet from an American author.

Lastly, the case now reported to this Society may be the first operation complicated by bony ankylosis.

This is what Americans have done in the hip-joint amputation.

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ART. II.—LEPROSY IN ICELAND. By HJALTELIN REYKJAVIK, Chief Physician of Iceland. Communicated to the Gynæcological Society, and read January 17, 1871.

*Leprosy*, or *elephantiasis*, is another endemic disease in Iceland, nearly equally frequent in men and women. It was in former days very common all over Europe; but it is at present most frequent in Norway and Iceland. There are two chief forms—namely, elephantiasis anæsthetica, or anæsthedos, and e. tuberculosa, or nodosa, as it is also called by some dermatologists. These two species of leprosy are still in Iceland as cha-

racteristic as they were twelve hundred years ago, in the days of that most excellent medical writer Aretæus Cappadox, who, in his immortal work on chronic diseases, has delivered to posterity a most graphic description of this frightful disease.

I should, indeed, unduly lengthen this report if I were to enumerate all the symptoms of this dermatopathic malady, the history of which may be found in any of the large works on the skin diseases, and I will therefore only make some few remarks regarding its frequency in Iceland, and upon the treatment which I have found the most suitable for its alleviation and cure.

In the middle ages leprosy seems to have been very frequent in this country, and, as it was then believed to be contagious, a kind of sequestering hospitals were erected, and although they were miserable abodes, they lasted for many centuries. In the year 1840, when I was still a very young physician, I was sent by the Danish Government to this my native country, in order to investigate the causes of the frequency of the disease in Iceland; but although I then found Icelandic leper hospitals in a very bad state, I was obliged to confess that they were not worse than might have been expected, as they were nothing but an institution of the middle ages, now quite out of fashion. I advised the Danish Government to have them abandoned as soon as possible; this was done, and I think that the poor lepers are better off now than they were in former days, when the filth of the hospitals could do nothing but aggravate the disease itself.

From that time I have made many inquiries about the nature of this atrocious disease, and have arrived at the following conclusions:*

1. Leprosy is a chronic blood disease, occurring nearly equally in both sexes, and is hereditary, but not contagious.

2. The most characteristic alteration in the blood is the want

* Dermatologists will be interested by the paper upon the above subject, by the same author, in Dr. Dobell's Reports on the Progress of Practical and Scientific Medicine in Different Parts of the World. London, 1870, p. 283.

of potassium salts, occasioning fatty degeneration of the kidneys and the heart.

3. The want of potassium salts makes the blood viscid and unfit for a healthy nutrition of the organic tissues; and hence the atrophy and fatty degeneration found nearly everywhere in the bodies of leprous patients. Hence also the butyric and caprylic acids found in the perspiration of patients affected by elephantiasis, which in older days formed the characteristic and well-known odor caprinus that, without exception, accompanies elephantiasis tuberculosa.

4. On account of the want of potassium salts the uric acid concretions are very common in these patients.

5. The real cause of leprosy is the wretched state of mankind in every corner of the world where this disease has been or still is endemic. In order to become convinced of this great truth, we have only to read the older and newer accounts of the frightful devastations and miseries occasioned by this malady. As the best and newest reports on this subject, I will especially recommend those made to the Royal College of Physicians, in London, from several of the British colonies in the East Indies and other places.

6. A wretched state of human beings, as to their dwelling-houses; their unhealthy diet; their want of cleanliness, of washing and bathing, of healthy and well-prepared food; their dirty and insufficient clothing, may in every latitude, in all climates, and with every kind of the human race, occasion leprosy, which once generated may easily become hereditary, but which, also, under more favorable circumstances and a better and more refined skin-culture, may again be quite overcome and radically cured.

This is the great result of experience, hidden in the annals of medicine, if accurately read and understood.

7. Leprosy was of old and during the middle ages one of the most common and most dreaded chronic maladies, not only in Europe, but also in Asia and Africa. In Europe it has vanished since the introduction of a better and more refined method

of living, and, as it seems, especially since the introduction of potatoes and other vegetables used as food for the lower and poorer classes. It is probably from this cause that the wretched state of the poor Irish people has not, as yet, been able to generate leprosy in that country, for it is well known that the Irish population feed, to a great extent, on potatoes and other vegetables.

8. I consider potatoes as the most valuable food for those affected with elephantiasis tuberculosa, both for men and women.

As to the statistics of this disease I must make the following remarks.

About 1780 the number of all leprous patients in Iceland was found to be five per thousand of all the inhabitants. Fifty years later, about 1830, this number had sunk down to three per thousand, and at present it cannot be estimated higher than one per thousand, and it seems, therefore, fast dying out. It is, as before remarked, equally frequent in women and males; but the anæsthetic form seems rather more frequent in women than males. It is curious, but it is nevertheless a well-observed fact, that the married state accelerates the outbreak of leprosy in all the families where it is or has been hereditary. That intermarriage is extremely dangerous in all leprous families is a matter of course, and ought, therefore, to be strictly prohibited by law.

The treatment of this disease is the same in men and women—great cleanliness, frequent bathing, a strengthening diet, with fresh vegetables, as potatoes, cochlearia, and salad, combined with the internal use of chlorate of potash and bromidum potassii, are the best remedies. In the anæsthetic form, I have found the teriodide of formyl of great service, but I have never seen a cure produced by the so much vaunted arsenical preparations.

ART. III.—THE PATHOLOGY AND TREATMENT OF GLYCOSURIA.

A correspondent of the "British Medical Journal," writing from Naples, recounts a new theory concerning the pathogenesis of glycosuria advanced by Professor Alnaldo Cantani, of that city, and, what is of more practical moment, a successful mode of treatment based thereon, so striking in its results that we need make no apology to our readers for quoting it at length. He says:

Professor Cantani is firmly convinced that in diabetes it is not a question of an increased production of sugar, but, on the contrary, it is one of deficient combustion, owing to there not having taken place the progressive transformation into lactic acid or fats of the sugar which has been eaten or transformed from amylaceous substances. He suspects, therefore, that the diabetic sugar is not true glucose, although it presents the same chemical reactions, but that it is a modification of normal glucose less easy to be oxydized, whence he calls it *paraglucose*. From this it results that, while the sugar passes off undecomposed in the urine, the diabetic patient consumes all his own fat; the many albuminates and fats which he eats are not sufficient for the organic combustion, and therefore the albuminates of the tissues also are disproportionately reduced. To confirm this opinion there is the fact that the quantity of sugar in diabetic patients, provided the disease be not too far advanced, obeys absolutely the modifications of the diet; so that a patient who, with a preponderance of amylaceous food, gives in the urine from 400 to 500 *grammes* of sugar every day, with an exclusively meat diet does not give more than from 30 to 40 in the first twenty-four hours, and within a few days gives none at all. If, then, in the more grave forms of diabetes the melituria continues notwithstanding the withdrawal of every non-albuminous aliment that happens probably because not only the amylaceous substances, but also every species of saccharine or glucoid matter may become transformed into diabetic sugar. So the sugar of the muscles, which appears directly transformed in the urine, as inosite, in inosuria or inositic diabetes, may un-

dergo the same transformation. He thinks also that another source of production of sugar in diabetic patients limited to an exclusively meat diet, rests in the gelatinous or glutinous tissues of the flesh, which Bœdeker succeeded in transforming into sugar apart from the system, and which then might become subject, if not normally at least under determinate pathological conditions, to this transformation also in the living system. All these are sufficient to explain clearly the quantity, by no means small, of sugar that appears in the urine of diabetic patients fed exclusively upon meat, without there being the necessity of recurring to a transformation of the albuminates themselves into diabetic sugar.

Another important fact consists in his observations on the low temperature of diabetic patients, and the generally small number of their respiratory movements. Professor Cantani has demonstrated from many cases that the temperature of diabetic patients—if there do not exist any complication that gives rise to febrile symptoms, such as pulmonary tuberculosis, exacerbated gastric catarrh, etc.—oscillates regularly between 35 and 36 degrees of Celsius (95 to 96.8 degrees Fahr.) and sometimes descends below 35 degrees, when they suffer from tuberculosis. The temperature at 37 to 37.5 degrees (97.6 to 98.5 Fah.), which they then manifest at evening, indicates the presence of fever, and has the same signification that a temperature of 38 to 39.5 degrees (99.4 to 102.1) would have in a person not diabetic. Professor Cantani has at present in his hospital a diabetic patient who has a mean temperature of 35½ degrees of Celsius (96 Fahr.), and does not make more than eight or nine respirations in the minute. This case is a most eloquent proof that diabetic patients experience a diminution of organic combustion, which is the reason that the sugar appears unconsumed in the urine. If there are cases of diabetes in which there abound in the urine those extractive substances that indicate of themselves also a diminished organic combustion, there are others in which the urea is increased double and triple, owing to there being substituted for the deficient combustion of the saccharines that of the albuminates.

Diabetic patients grow thin in so extraordinary a manner; first, because they cannot employ the sugar and starch as organic combustible material; secondly, because in them the process of combustion is effected completely at the expense of the albuminates and the fats. The non-combustibility of the diabetic sugar is precisely the reason that the oxygen cannot find the means of fixing itself in the system; and hence the low temperature and the diminished number of the respirations.

These exclusively theoretic views of his, led Professor Cantani to administer lactic acid, and to limit his patients to an exclusively meat diet in diabetes. The lactic acid appears to take the place of the sugar as a combustible, by representing in itself that chemical transformation of the saccharine, which, having passed over the condition of glucose, is decomposible by ulterior oxydation into carbonic acid and water. The exclusively meat diet has the object of reducing to a minimum the introduction of saccharines and sugar-producing substances, and of thus leaving to repose that organ whose affection, certainly curable in the beginning, is the cause of that alteration in the saccharines which renders them incombustible. That organ is probably the liver, and not, as the Germans now believe, the pancreas. Of lactic acid, he gives every day from 5 to 10 *grammes*, diluted in from 200 to 300 *grammes* (75 to 150 grains, in from 8 to 10 fluid ounces) of plain water, and without any corrective.

The exclusively meat diet means rigorously one of plain meat, roast or boiled, into the preparation of which there should not enter the smallest fragment of bread or of flour, nor of any substance whatsoever of the vegetable kingdom, not even sauces of milk or of eggs (which also contain sugar); the only seasoning permitted is salt, oil, and a little vinegar. For drink, water (either plain or with a little of the very purest alcohol) is allowed; coffee, tea, wine, etc., are prohibited. If the patient continues to have sugar in the urine under this treatment, it is probably a case of inosite which is becoming transformed into diabetic sugar. The results of this system of treatment are surprising. Professor Cantani does not pretend that by means of it *all* dia-

betic patients can be cured; on the contrary, he gives warning that nothing is to be hoped for in cases that are too far advanced, and especially when pulmonary tuberculosis already exists; probably, then, the organ principally affected is irreparably destroyed, incapable of resuming its function and its influence upon the transformation of the saccharines.

But in somewhat recent cases the cure is almost certain and most speedy. I have seen in the same hospital a lieutenant of the army, who, having been diabetic for many months, entered it emaciated, impotent, and excessively weak; with polyuria, thirst, and extraordinary hunger. After twelve days the last trace of sugar had disappeared from the urine, and this patient within six weeks gained nine pounds in weight—a pound and a half each week! He left the hospital in excellent condition, florid, strong, without thirst or hunger; he continued the treatment at home for two months more, then he resumed a mixed diet; and now more than eight months have elapsed, during which, while eating indiscriminately, he enjoys most excellent health, weighing twenty-one pounds more than when he first entered the hospital; and he does not now present in the urine the slightest trace of sugar. Another case, equally interesting, was that of a tailor from Naples, who was admitted into the clinic in a desperate state; he left it florid and robust; and now that for more than seven months he has been again eating promiscuously, he is more fat, rubicund, vigorous, and energetic than he used to be previously to having been attacked with diabetes. Professor Cantani presented also to our notice other patients; as, for example, a parish clergyman, also cured in the clinic, and various other persons treated by him privately. Amongst these, a most interesting case is that of a proprietor from Aversa, the Cavaliere Romano, who, after having suffered for about a year, was cured of the melituria in only four days; and who, when he had recommenced eating farinaceous food after a lapse of sixty days, especially French beans, preserved his urine free from every trace of sugar.

That lactic acid really is an important remedy in diabetes,

Professor Cantani concludes, from the fact that even in the cases in which the patients are not subjected to a rigorous and exclusive meat diet, the use of the lactic acid, although it does not exercise its influence so far as to prevent the melituria, nevertheless arrests many of the unfavorable consequences of diabetes, improves the nutrition, increases their strength, and evidently prolongs their life. The Professor showed us a young man in the clinic, an *employe* from Melfi, who, from the state of emaciation, wasting, exhaustion, to which he was reduced by polyuria, thirst, hunger, etc., not observing the treatment rigorously, did not recover from the melituria, but with the lactic acid regained all his strength, became once more powerful, florid, and robust, with the subjective feeling of being in perfect health, and with the disappearance of all the truly diabetic phenomena, such as hunger, thirst, polyuria, exhaustion, emaciation, etc., so that he believed himself to be perfectly cured. Two other diabetic patients, already consumptive, treated in the clinic, although the sugar had not completely disappeared from the urine, nevertheless improved in strength, and gained within from three to four months, one of them one and a half, the other two and a half *kilogrammes* in weight.

In view of the paucity of our therapeutic resources in this obstinate malady, any remedy that gives promise of curative action is to be welcomed, and we trust that Professor Cantani's prescription may prove as successful in other hands as it is reported to have been in his.—*N. Y. Med. Gazette.*

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ART. IV.—THE ORIGIN OF FIBRIN. By LOUIS S. STILLÉ, M. D.

The growth of physiological science may be compared to the formation of stalactites in limestone caverns. For ages facts, diluted with theory, have percolated the Temple of Human Experience, depositing therein the amount of truth they contained, which by gradual accretion has reached an enormous bulk, while the ideas and opinions at first necessary to enable the mind of

man to digest the solid material have entirely vanished. The progress of physiology has been so rapid during the past few years, and the accumulation of facts become so great, that some modification of the existing theories may naturally be expected, particularly of those relating to the blood and the uses of its various constituents. We have therefore selected for discussion this interesting and important subject, which is the basis of what are commonly known as the antiphlogistic doctrines, and has perplexed practitioners for many years. Fibrin has long been looked upon either as the chief element of nutrition or as an effete material, destined to be excreted from the body. The most bitter controversies have arisen between the parties holding these opposite views, neither one venturing to assert that, after all, the very existence of such a substance as fibrin may require to be proved. Quite recently, however, several eminent microscopists and chemists who have investigated the subject have reached a most startling and unexpected result, which destroys at one blow the most cherished doctrines of hyperinosis and hypinosis, and proves anew that the "post hoc propter hoc" method of reasoning is not to be depended upon in therapeusis. In order to understand the present view, it becomes necessary, first, to determine what fibrin is; then, to consider its existence or non-existence in the blood; and finally, to seek the most plausible theory of its origin.

What is fibrin? When healthy blood is withdrawn from a living animal, it presents the appearance of a homogeneous red liquid, but if allowed to remain at rest and at the temperature of 90° F., it soon undergoes a change, by which it is converted into a semi-solid mass, closely resembling currant jelly. This change, known as spontaneous coagulation, has been shown by various observers to consist in the development of a network of minute fibres throughout the liquid, and these fibres are therefore spoken of collectively as fibrin.

Does fibrin exist in the blood? It is evident that a substance which has been obtained from a liquid can only preëxist in that liquid under one of three forms—solid, liquid, or gaseous;

and that fibres can be present only as fibres, or as minute molecules having a tendency towards aggregation in straight lines. Filaments of fibrin are very minute, and therefore, it may be objected, are not easily seen under the microscope unless aggregated, and may be supposed to exist like filaments of horse-hair in syrup; but, unfortunately, for the correctness of this supposition, single fibres of fibrin can be seen under the microscope and the process of fibrillation watched. Thus, Lehmann says, "There appear here and there individual points or molecular granules, from out of which very soon extremely fine straight threads spring;"* and Addison, "Exceedingly delicate and perfectly cylindrical fibres, having a diameter even less than that of the molecules, first appear, crossing the field of the microscope;"† whence it is evident that fibrin is formed with its recognized physical properties only in the act of coagulation. In the filtration of blood, moreover, there is no separation of fibrin previous to coagulation, whereas if fibrinous filaments existed in suspension, they should remain upon the filter irrespective of such change. The hypothesis that fibrin exists in the form of molecules (independently of the corpuscles) is disproved by the experiments of Mr. Lister,‡ who found that when the corpuscles are removed from the blood it is absolutely incapable of coagulation. By molecules of fibrin we here signify particles of the same composition with fibrin, and not the primary molecules of Gulliver, or the bioplasm of Beale, which will be hereafter considered. There now remains only one condition in which fibrin may exist in the blood; that of a liquid, since the supposition of a gaseous state is absurd. A liquid can become solid (in all human experience) only by evaporization or crystallization, and these have been shown not to be requisite in the formation of fibrin. Evaporation may be prevented by covering the blood with oil, by enclosing it in a mercurial vacuum, or by ligature of a vein, and yet coagulation will take place. The resemblance

* Jones and Sieveking's Pathological Anatomy, p. 29.

† Transactions, Provincial Medical and Surgical Association, vol. xi. p. 241

‡ Lancet, 1863, p. 140, et aliunde.

of fibrillation to crystallization is more apparent than real, since the conditions for the development of the one are totally different from those required by the other. Cold and rest together prevent the production of fibrin, while they accelerate the formation of crystals. Agitation hastens coagulation, while it retards crystallization; the one forms crystals of an indefinite size, which may be redissolved by heat, while fibrinous filaments are of a definite size, and cannot be redissolved by heat. If we add to these the statement of Virchow, that venous obstruction will cause exudations of all the admitted fluids of the blood except fibrin, and the notorious fact that pure liquid fibrin has never been isolated, the conclusion seems to be perfectly justifiable that fibrin, as such, does not exist in the blood.

If it is not found as fibrin in the blood, and yet is formed by the components parts of that liquid, the question arises, What are these component parts, or rather proximate principles of the blood? And what relation do they each bear to fibrin? It suffices for our present consideration of this subject to regard the blood as being composed of albumen, salines, red and white corpuscles, and water. Of these, water, salines, and red corpuscles may be excluded, as none of them form fibrin by themselves, or when in combination, and the latter (corpuscles) may be filtered away from blood without hindering coagulation. Albumen, however, is a substance which, universally distributed through animated nature, forms the material from which all living structures are derived, and therefore must be looked upon as the essential origin of fibrin, as of all organic tissues. Containing the four elements of organic nature in large proportions, it would seem to be the fittest representative of the universal pabulum, or food, as distinguished from the bioplasm, or living organism which feeds upon it. Its distinguishing characters to the physiologist are coagulation in white flakes by heat or nitric acid, and liquidity at the temperature of the body. That fibrin is formed from albumen can be demonstrated by the following facts: "The chyle contains more albumen and less fibrin than the blood; consequently a part of the albumen must have been

converted into fibrin. The chyle, immediately after being absorbed by the lacteals from the intestines, contains more albumen and less fibrin than that which has passed through the mesenteric glands. The arterial blood contains more fibrin and less albumen than the blood in the veins, and this can only result from the transformation of the latter material into the former."* Prof. Brück, after a large number of careful analyses of the blood of animals, remarks that "we have no further inducement to suppose that there exists in the blood-plasma a peculiar substance (so-called fluid fibrin), but are now compelled to admit that solid fibrin is formed at the expense of a part of the albumen dissolved in the plasma."†

The language which is here employed is noteworthy. A *part* of the albumen alone is changed into fibrin; why not all of it? What peculiar influence resides in this changeable portion which is capable of altering its physical condition? To ascertain this point, and led by several observations on the chemical nature of fibrin, Mr. A. H. Smee discovered that a current of oxygen gas, being passed through various albuminous fluids, gave rise to a substance apparently identical with fibrin, both physically and chemically.‡ This fact however, though explaining how albumen may be converted into fibrin by the oxygen in the blood derived from the lungs, does not answer so well in its application to the fibrin of chyle and lymph, which are formed, the one from food, the other by a retrograde metamorphosis of tissue. It is true that the fibrin in these liquids is imperfectly formed, but the knowledge of its existence in these situations is sufficient to argue that oxygen is not the only factor. Besides this objection, there is the present theory of the non-existence of free oxygen in the blood as distinct from the red corpuscles; and since these are not requisite to coagulation, the inference likewise is that oxygen is not essential.

Let us suppose, however, that the white corpuscles are oxydized

* Rudolph Haas, London Journal of Medicine, vol. ii., p. 648.

† British and Foreign Medico-Chirurgical Review, vol. xix., p. 208.

‡ Proceedings of Royal Society, vol. xii., pp. 899 and 505.

albumen (which is merely a supposition, since they have not been analyzed), and trace the connection between them and fibrin. If it can be proved that these corpuscles bear a constant relation to fibrin, that the two increase and decrease simultaneously, that the presence of the one invariably coïncides with that of the other, and that the corpuscle has been seen in the act of converting itself into filaments, it would seem almost certain that fibrin is only another name for the white corpuscle. And this is precisely the character of evidence which we are able to offer in this case. Premising that the primary molecule of Gulliver, the protoplasm of Max Schultze, and the bioplasm of Beale, are all different names for the white chyle and lymph corpuscle, we will present the evidence as briefly as our space will allow.

The first situation in which fibrin is found, and in which it did not previously exist, is in the central lacteal vessels of the intestinal villi (Gulliver)* during the absorption of chyme. Drs. Carpenter† and Kölliker‡ demonstrate the presence of white cells in this chyle. In the mesenteric glands, fibrin and corpuscles suddenly increase in amount. Recklinghausen§ observes that the follicular substance of these glands is probably to be regarded as the chief formative centre of the cells, while Salisbury‖ describes the formation of such corpuscles in the follicles. From the commencement of a villus, then, to the termination of the lacteals in the thoracic duct, fibrin and corpuscles steadily increase together, until they are poured into the general circulation. The same may be said of the contents of the lymphatic vessels, though the origin of the lymph is purely conjectural. The only physiological increase of fibrin in the blood occurs during digestion and pregnancy, both of which conditions are also distinguished by an increase of white cells (Becquerel and Rodier; Virchow).

* Times and Gazette, 1863, vol. ii., p. 553.
† Physiology, London, 1842, p. 160.
‡ Stricker's Hystology, Syd. Soc. ed., vol. i., p. 342.
§ Stricker's Histology, loc. cit.
‖ Amer. Jour. Med. Sci., April, 1866.

In certain diseases a notable increase of fibrin occurs, and Virchow, assures us that such increase is always accompanied by a similar one of the colorless corpuscles.* The absence of fibrin has been observed in cases of toxæmia from various causes, such as poisoning by hydrocyanic acid, etc., typhus, purpura, scorbutus, and advanced tuberculosis. Unfortunately, however, the normal proportion of white corpuscles in the blood is so small that no satisfactory evidence can well be given of their decrease.

The so-called inflammatory lymph has been shown by Paget to bear a close relation to the blood as regards the quality of fibrin formed by the two liquids. As the clot of blood drawn from the arm of a patient suffering with pericardial effusion is firm or loose in texture, so may the false membranes be expected to vary in consistence. Addison,† Beale,‡ and Chalvet,§ have demonstrated the presence of colorless corpuscles in these plastic exudations; while the recent investigations in Germany by Cohnheim, confirmed by Woodward and others in the United States, supply the missing link in the chain of evidence by proving the plastic corpuscles to be identical with the white cells of the blood. It would thus appear that fibrin is always associated with the colorless corpuscles in the chyle, lymph, blood, and plastic exudations; and, since it has been previously ascertained that fibrin does not exist in the blood apart from these cells, the inference must be either that the corpuscles constitute fibrin or that they unite with some element of the serum in order to produce it. In both cases their presence is absolutely necessary to coagulation. If the hypothesis that the white corpuscle is composed of oxydized albumen be accepted, the only difficulty would consist in understanding how spherical aggregations of molecules can become linear in form. Barry, Beale, and Salisbury tell us that they do so change their shape,

* Cellular Pathology, p. 199.

† Experimental Researches, London, 1843.

‡ Archives of Medicine, London, 1861, pp. 251–2.

§ These de la physiologie pathologique de l' Inflammation, Paris, 1869, p. 38.

and Professor Kirkes says that the white corpuscles cannot by any mode of analysis yet invented be separated from the fibrin of mammalian blood. This statement is manifestly correct if the corpuscles are fibrin; and at this point some reference must be made to the faulty method of analysis which has been used. A specimen of fresh blood is examined by the microscope, in order to determine the number or amount of corpuscles. In order to determine the amount of fibrin the *microscope* is *not* used, but the blood is whipped, or allowed to coagulate, and the amount of fibrin calculated by scales and weights. How can it be asserted that the corpuscles have not been weighed under another form and called by the name of fibrin? The reply is quickly given—by defibrinating a specimen of blood and examining the serum for corpuscles. Let Andral* give the result of his observations upon this subject: "When we in any way deprive the blood of all its fibrin, we no longer find white corpuscles in the field of the microscope"; and again, "The whole of the fibrin is held in suspension in the blood under the form of white corpuscles, one-five-hundreth of a millimetre in diameter."

This conclusion has also been reached by Barry, Beale, Hern,† Addison, Salisbury, and Mantegazza,‡ independently of one another, and the theory has been propounded that pus-cells are merely white corpuscles which have lost the property of assuming a filamentous condition, and consequently retain the spherical appearance. The discussion of this view need not at present occupy our attention, especially since the most important part of the subject yet requires consideration.

It has been shown that the presence of white corpuscles is indispensable to the production of fibrin, and that the probabilities are very strong in favor of considering them as one and the same substance—viz., oxydized albumen; but a careful analy-

* Pathological Hæmatology, translated by Meigs, and Stillé, 1844, pp. 34 and 35.

† Ranking's Abstract, 1848.

‡ Nature, vol. i.

sis of the proofs advanced must still be made. The experiments of Alexander Buchanan, in 1836, on the admixture of serous fluids, and the more recent experiments of Schmidt upon the same subject, render it probable that although no fibrin may be formed, as a physiological process, distinct from corpuscles, these bodies may nevertheless represent only one of the factors in its production. A substance has been found in blood-serum which is apparently as essential to coagulation as the white corpuscles. This material Kühne has named paraglobulin. If extracted from freshly-drawn blood, no coagulation occurs in that liquid until it is replaced. If added to hydrocele fluid, which at best forms only a small coagulum, instantaneous fibrillation is the consequence. From such well-attested facts there is no escape, and, therefore, the previous conclusions must be modified, and instead of saying that the corpuscles *are* fibrin, we now assert that they *make* fibrin. For the corpuscles are organisms, and when an organized body acts upon an unorganized one, and a third body is produced, the active part is always ascribed to the former. There is yet a wide field open for research in tracing the origin of paraglobulin.

To recapitulate. Fibrin does not exist as such in the blood, but is a product of the action of the white corpuscles upon a material named paraglobulin, in the serum.

"Its appearance, its coagulation, are signs of its formation."—*Robin.*

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Iodized Milk.—From Hoffman's most admirable report on the "Progress of Pharmacy, 1869," we make the subjoined extract, which has a practical value for the physician: "It is well known that milk takes up iodine, disguising its taste, smell, and color, completely; since iodine is an antiseptic, iodized milk keeps for some time. Dr. Hagar calls attention to this fact, and suggests that this, perhaps, is the mildest form of administering iodine. Its therapeutic effect seems to be equal, only, to about

one-fifth of the iodine. Hagar thinks iodized milk will soon become a favorite form of administering iodine, and suggests the following mode of preparation: One part of iodine dissolved in ten parts of alcohol, admixed with ninety parts of fresh, warm cow's milk.—*Medical Press and Circular.*

## ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—ANALYSIS OF VARIOUS ARTICLES. Published in the "Medical Times and Gazette," the "British Medical Journal," and the "London Lancet," etc. (Original copies). By Prof. JAMES M. HOLLOWAY, M. D.

*Fracture of the Patella.*—In a clinical lecture by Jonathan Hutchinson, surgeon to the London Hospital, etc., the following principles are educed in relation to the treatment of fracture of the patella; the separation of the upper and lower fragments is not due to muscular *contraction.* The *elasticity* of the muscles may cause slight separation, but it is so slight, and so easily overcome, that it is not to be taken into account. When there is considerable separation of the two fragments, it is due solely to effusion in the joint and adjacent parts. In all cases, whether there is much or little separation, a posterior splint should be applied to keep the limb fully extended; after which the former fragment must be drawn upwards and fixed by one set of adhesive straps, and the upper fragment must in a similar manner be drawn downwards and fixed in proper position by another set of straps.

By this method the usefulness of the member will be preserved, even if bony union does not take place, which latter is not an uncommon result.

*Tasteless Castor Oil.*—This drug can be rendered tasteless by the addition of equal parts of glycerine, into which a few drops of the oil of cinnamon has been rubbed.

*Koussin for Tape Worm.*—At a meeting of the Royal Society of Medicine, of Vienna, Prof. Zeideshorf called attention to *koussin*, the active principle of kousso, as a valuable remedy for the rapid expulsion of tape worm. The dose is two scruples in two powders, given one hour apart. A diarrhœa-like motion soon occurs, bringing away the worm without any disagreeable constitutional effects.

"Genuine koussin is light yellow in color, with a scent like leather, hardly soluble in water, but will dissolve in alcohol and alkalies."

*Acupuncture for Relief of Pain and Muscular Debility.*—Mr. P. Teale thus arranges in two groups those cases that are most likely benefited by acupuncture: "1st. Cases of muscular debility, and 2d. Cases where pain is present. Amongst the former may be enumerated cases where there has been a bruise of muscle (or nerve), as in a fall on the deltoid, or stretching or tearing of muscle or tendon, as in dislocation of shoulder followed by rest—*i. e.*, disuse of muscle for two or three or four weeks, and in which, at the period of resuming work, the muscles are powerless. After four weeks it is probable that the longer the delay the less chance there is of acupuncture doing good. In regard to the cases where it is adopted for the relief of pain, his rule is a somewhat artificial one. Whenever a fixed pain has existed for some time, and has resisted ordinary means of relief, general and local, he acupunctures. Speaking roughly, out of ten cases there is a brilliant result in one, improvement in three or four more, and failure in the remainder. The cases in which success most frequently results, are those in which there has been an injury or subacute inflammation of fibrous tissue, such as tendon or ligament, as occurs in sprain, and some erratic forms of rheumatism."

*Rheumatism Treated with Veratrum Viride.*—"At a late meeting of the Clinical Society of London, Dr. Silver read a paper on this subject, in which he stated that the drug was given in two minim doses every hour; ten minim doses, which were first given, causing sickness and pain in the epigastrum.

Its effects were noticed chiefly with regard to two particulars, reduction of temperature and diminution of pain."

In 1860 the writer treated a case of acute rheumatism with veratrum viride exclusively, and its effects were so well marked and thorough in actually cutting short the attack, that it deserves extended notice.

James S. McVoy, druggist, had about eight weeks before suffered from a severe attack of acute rheumatism extending to all the large joints. He was confined to his bed and room between four and five weeks; and although he took large doses of anodynes, besides quinine, the alkalies, and was enveloped in cotton batting, he suffered great pain, and convalesced slowly. After he had recovered from this attack, in a letter from his father, Dr. McVoy, of Mobile, Alabama, he was advised to try the veratrum if another attack occurred.

In a short time Mr. McVoy exposed himself at a dancing party, and induced a second attack. For the first thirty-six hours I declined to make use of his father's prescription—viz., fourteen drops of Norwood's tinct. verat. vir. every three hours. At the end of that time, however, I agreed to supervise the employment of the remedy, he assuming all responsibility (it must be remembered that at that time veratrum was not in general use, and it was regarded as a very dangerous remedy). The veratrum was faithfully given, and in less than forty-eight hours nausea, and vomiting, and purging, and profuse sweating, were induced, with a prompt relief of the pain and an amelioration of all the symptoms. Small doses of French Brandy checked the vomiting and purging, and controlled the heart's action. The patient had a rapid convalescence.

Mr. McVoy is now living in Selma, Alabama.

As suggested by Dr. Silver, such large doses are not necessary, and are too often followed by alarming heart depression, vomiting, and purging.

# CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

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LESSONS FROM THE MEDICAL CLINIC AT THE "HOPITAL DE LA CHARITÉ," given by S. JACCOUD, Assistant Professor to the Faculty of Medicine at Paris; Physician to the Hospital St. Louis; Chevalier of the Legion of Honor; Corresponding Member of the Royal Academy of Science of Lisbon, and of the Medical Societies of Berlin, Vienna, Wurzburg, etc. Containing twenty-nine wood cuts and eleven chromo-lithographs. [Translated by Dr. J. D. JACKSON, of Danville, Ky.]

## SIXTEENTH LECTURE—PROGRESSIVE NERVOUS ATROPHY.

Diagnosis of the Lesion---Forms of Atrophy of the Nerves---Mechanical Atrophy---Atrophy by Inertia---Spontaneous Atrophy---Anatomical Characteristics of the Lesion---Examples of the Diverse Forms—The Relations between Atrophy of the Nerves and Neuritis.

Progressive Nervous Atrophy—The Relations between this Morbid Form and the Ascending Paralysis of Landry; with the Ascending Paralysis of Duchenne; with the Ascending Neuritis of Duménil—Concerning the Naming of this Progressive Paralysis.

Results of Atrophy.

Gentlemen,—The progressive paralysis, of which we have studied the clinical characters and the diagnosis, cannot be attributed to a simple functional trouble. The basis upon which this proposition reposes ought to be engraven upon your minds; it is always thus; whenever a paralysis, whatever may be its seat and extent, is accompanied during the first ten days by atrophy of the muscles, by an obliteration of reflex motility, by a diminution or the entire loss of electric contractility, one may rest assured that this paralysis results from a material alteration, and not simply a functional perturbation. Such being the law, the bearings of which are not enfeebled by any exceptions, it is clear that in the instance which occupies us, the paralysis is dependent upon a lesion of the nervous system, and since the cause of this paralysis is situated in the spinal nerves, we are

conducted to the admission, without the possibility of hesitation, that in our patient, of Saint Charles's Ward, the peripheral nerves are affected with a discriminated alteration in a certain number of their branches. As to the nature of this alteration, I think I can here attribute it to an atrophy of the nerves. This assertion will astonish you, perhaps, because nervous atrophy has not yet found a place in our classical treatises on pathology, but this lesion, however little known, I would say is even less rare than you would think it. Permit me to enter upon some of the developments of this subject.

Atrophy of the nerves takes place in a great number of very opposite conditions; I must class them in three groups, which respond to three forms of atrophy.

The first, which is the most frequent, is of traumatic origin, or is caused by abnormal compression of the nerves; just as a divided nerve undergoes atrophy principally in its peripheral extremity, just as a nervous cord submitted to a prolonged compression diminishes in volume and undergoes fatty degeneration, which is the anatomical characteristic of this form of atrophy. The degeneration is pure, that is to say, it is not connected with connective proliferation nor amyloid deposits; the lesion is confined to the marrow and to the cylindrical axis; the fatty molecules accumulate in the nerve-tubes, and, by their accumulation, destroy the contents; the sheaths remain intact, or rather, according to Hasse,* they transform themselves into ordinary cellular tissue to such a degree as to be unrecognizable. Examples of this mechanical atrophy, by comparison, are extremely numerous, especially for the cranial nerves. All the tumors of the base of the cranium, all the modifications in the calibre of the osseous canal, through which they come, can bring about atrophic degeneration of the nervous cords. Rokitansky pointed out atrophy of the chiasm and bands of the optic nerves as a consequence of dropsy of the third ventricle;†

* Hasse, Krankheiten des Nervenapparates, in Virchow's Hanbuch. Erlangen, 1855.

† Rokitansky, Lehibuch der Pathologischen Anatomie. Wien, 1856.

the morbid formations of the pituary gland, the tuberculous deposits of the pia-mater may have the same result; the optic nerve may undergo atrophy under pressure of aneurisms of the ophthalmic artery; Turck has observed atrophy of the sixth pair following induration and dilatation of the inferior and anterior cerebellar arteries;* atrophy of the facial has before now been a consequence of narrowing of the long osseous canal through which it runs. Further than this, in the absence of intra-cranial tumors, in the absence of every lesion, it is sufficient for a thickening of the meninges of the cord to take place, for the nervous cord it envelops and embraces in the tumefaction to be paralyzed by atrophy. Among other facts which I can cite you in support of this assertion, I would refer to the remarkable observation of Ziemssen. It relates to a man thirty-three years of age, who died with a facial paralysis, complete on the right, incomplete on the left, and with multiple paralysis of the oculo motor nerves. On autopsy there was found a chronic inflammation of the pia-mater at the base of the brain, characterized by an abundant exudate and neoplastic formation of the connective tissue. The nerves, paralysis of which had been noted in life, were embraced in the thickness of the exudation; their terminal portion presented atrophic degeneration, the initial portion, for a short portion was in a full state of aggressive metamorphosis.† There has likewise been seen mechanical atrophy of the phrenic nerves, and the par vagum following their compression by ganglionary tumors of the mediastumn; Hourmann has reported a fact of this kind.‡ Neither do the spinal nerves escape the effects of compression; when a tumor of the limb, aneurismal or otherwise, affects one or many of the nerves, they undergo atrophy in proportion to the energy of the compression they undergo; intra-vertebral exudates, tumors, osseous deformities, especially at a level with the conjugate foramina, have the same consequences.

* Turck, Zeitschrift der K. K., Gesellschraft der Aerzte in Wien, 1855.

† Ziemssen, Ueber Lähmung von Gehirnerven, etc. (Virchow's Archieves, 1858.

‡ Hourmann, Revue Med. Chir., 1858.

Such is the first form of atrophy of the nerves, I call it *mechanical atrophy*, in contradistinction to the two others.

I form a second group with those numerous cases in which the nerves atrophy, because their central or terminal organs have ceased their functions. There exists, in effect, an almost constant correlation between these two orders of phenomena; if the point of origin of a nerve, in the nervous centres, is altered so very profoundly as to lose its functional powers definitively, the nerve undergoes atrophy; there is the same result also if the original or central organs being intact, the terminal organs, these where the nerve distributes itself are altered or suppressed. Known facts tend to establish the opinion that it is the functional suppression of the terminal organs which has most influence upon atrophy of the nerves of sensibility, whilst it is the suppression of the central organs which brings about most surely atrophy of the nerves of motion. You should know that there is nothing more frequent than atrophy of the optic nerve after atrophy of the retina; generally in such cases the fatty degeneration of the nerve extends up to its origin, which is more or less deeply affected. In other organs this atrophy has been less frequently observed, however it has been seen. In an individual, one of whose kidneys was profoundly atrophied, Wundt examined the state of the renal nerves of that side, and he found them degenerated, the sheaths alone remaining intact; a very small number of the terminal branches had escaped the lesion.* Atrophy of the nerves of the limbs following lesion of the marrow or the brain, that is to say, in paraplegias and old hemiplegias, is a phenomenon of the same order developed under the influence of persisting inertia of the central organs, or origin of the nervous cords. This atrophy of the nerves, by suppression of function of the central or terminal organs, seems to be connected with a secondary degeneration of the spinal cord, from which the general functional sense is derived, that is to say, from above downward in the anterior cords, and following cerebral

* Wundt, Ueber das Verhalten der Nerven in entrundeten und degeneristen Organen. Heidelberg, 1856.

lesions from below to above in the posterior cords, following lesions of the cauda equina, an inferior extremity of the spinal axis. As it is by inertia of the original or terminal regions of the nerves that we have the immediate causes of atrophy, I propose to characterize this second group of cases, this second form of atrophy, by this designation—*atrophy by inertia.*

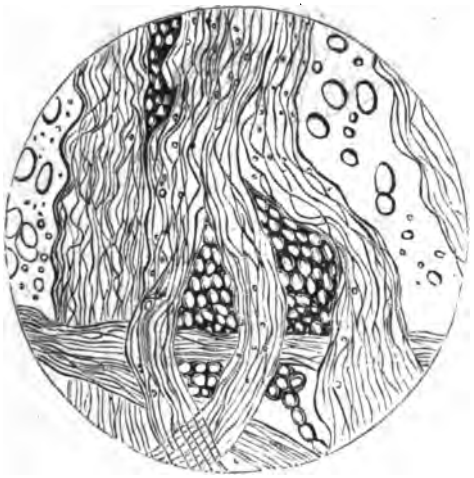
The third form of nervous atrophy differs from the preceding, in that it originates spontaneously without any mechanical condition, any alteration of the central or terminal organs which can be determined; because of its spontaneity of development this atrophy is not limited in its extent by the sphere of action of an appreciable material cause, it originates indifferently upon the diverse points of the peripheral nervous apparatus, and occupies a very variable portion. Nevertheless, its tendencies of localization are seldom varied from; it strikes the nervous cords by pairs or by groups; and in the last case it invades at once or in succession all the nerves which are united by a community of origin or common function. Thus, Rokitansky has observed in the marasmus which follows typhus, atrophy of the ganglions of the solar plexus and the superior mesenteric plexus;* on the other side, Wachsmuth has seen atrophy of all the motor nerves which originate from the bulb;† and it is to this lesion I would say, in passing, that I would ascribe the paralysis known as glosso-labio-pharyngeal paralysis. I have myself observed, under circumstances worth relating to you, an atrophy of the two pneumogastric nerves. Two years ago a man forty-two years of age entered La Pitié Hospital, where I had replaced M. Béhier; this individual had been seized with vomitings many days previously; at first they were infrequent, and consisted of alimentary matters, but ended by coming on when the stomach was empty; they were then glairy and bilious; when I saw this man for the first time, he had every day three or four vomiting spells; they were preceded by

* Wachsmuth, Ueber Progressive Bulbär-Paralysis und die. Diplegia facialis, Dorpt, 1864.

† Rokitansky, loco citato.

some nausea, but to be brief, the ejections of the matter vomited were made without effort. Things went thus for seven or eight days, all treatment was impotent, and I did not know to what cause to attribute these obstinate vomitings, when there arose certain peculiar new phenomena to dissipate all uncertainty. On the next day the voice was hoarse, and the patient was seized with a most painful panting; there was no appreciable lesion of the respiratory apparatus to account for these new accidents; soon the continued trouble of respiration was complicated with an access of dyspnœa, during which asphyxia was imminent, the voice was no longer raucous, but was extinguished; I diagnosticated a compression of the pneumogastrics. Two days afterwards the orthopnœa was continuous, and the patient succumbed. On autopsy I found in the lungs general sero-sanguinolent infiltration and emphysema, such as had been pointed out as following experimental section of the vagi nerves; hence I did not doubt the justness of my diagnosis; and when it was evident to me that there was no compression of the pneumogastric at any point, I took away the nerves themselves to study them microscopically. This examination shows us on

FIG. 1.—The nerve is much thickened; it is formed of fibrous tissue, circumscribing vacuoles which contain numerous fatty globules.



the two sides an atrophic degeneration of the nervous fibres; not simply a fatty degeneration such as I pointed out to you in the two preceding forms, but the fatty transformation with connective proliferation, that is to say, fibro-fatty degeneration or sclerous atrophy. The figures which I present you have been designed by M. Renault, interne of the service, and they faithfully represent this alteration; figure 4 is borrowed from Rokitansky; it exhibits fatty atrophy of the facial nerve; you can easily appreciate the analogies and the differences between these two lesions.

FIG. 2.—A point in the periphery of the pneumogastric after removal of the neurilemma. There is nothing remaining but the fibrous tissue.

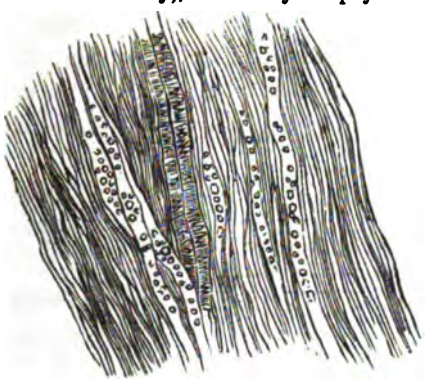
In this case it was impossible for me to discover the cause of atrophy of the vagi nerves; to the naked eye the bulb appeared sound, and committing the same fault with Wachsmuth, in the observation I cited you, I neglected to examine it with the microscope. Despite these defects, this case is nevertheless an example clearly marked of atrophy of the pneumogastrics, it is a landmark in the as yet little known history of the alterations of these nerves.

. As to the spinal nerves many authors, and especially Kierulf, Hebra, and Löberg, have observed spontaneous atrophy in spe-

dalskhed, the anæsthetic form of Norwegian leprosy. The lesion in this case partially affected the mixed nerves of the limbs, and it extended itself up to the posterior nervous roots; in certain cases the cords corresponding to the marrow have also been affected.*

Fig. 3.—Central part of the pneumogastric. Much fibrous tissue; certain nervous tubes, the cylinder of which is invisible, and which have a slightly nodulated aspect.

Fig. 4.—(Taken from Rokitansky), sclero-fatty atrophy of the facial nerve.



* Kierulf, Ueber die norwegische Spedalskhed, (Archiv. für path. Anatomie, 1852.)

Such are the principal facts which demonstrate our third form of nervous atrophy; to put it in clear opposition to the two first, I will call it *spontaneous atrophy*. It results from the preceding analysis that this atrophy, although rare, has already been seen in the vegetative nerves, and in the cranial and spinal nerves. It is not only by its spontaneity that this atrophy differs from the others, but it is also distinguished by its anatomical characteristics. Whilst the two first forms are principally if not entirely made up of a fatty degeneration, the third generally presents along with the fatty organization a hyperplasia of connective elements and amyloid deposits.

It seems from certain analyses of Bibra that they are very poor in water. According to this observer, the proportion of water in the sound nerves is, on the average, 69.5 in man and 63.8 in woman; now, in a woman of sixty-eight, he found in the upper portion of the sciatic 32.4, and in the lower part 39.3, and in the crural only 15. This observation was made upon the atrophied nerves of a limb which had been for a long time paralyzed; we do not know if the mortification also exists in other forms of atrophy. The results indicated by Bibra are the more remarkable, that in cholera, where there is such a considerable loss of water, the proportion of this principle in the nerves appears scarcely diminished. Voit has found in the sciatic of a man 62.9, and in the same nerve of a woman 63.1*.

Spontaneous atrophy of the nerves being anatomically characterized by fatty deposit and connective proliferation, it may be asked if these lesions are not the result of a nevritis. This question, it seems to me, does not allow of an unequivocal response; the situation is the same as for sclerous atrophy of the

Hebra, Skizzen einer Reise in Norwegen (Zeitschr. der k. k. Gesells. der Aerzte zu Wien, 1853.

Löberg, Die Spedalskhed in St. Jürgenhospital Zu Bergen (Norsk. Mogazin—Schmidt Jahrbucher, lxxx).

Compare: Virchow, Remak, Séance de la Soc. Méd. de Berlin, du 2 février, 1861.

Jaccoud, Les Paralysis, etc., Paris, 1864.

* Birkner, Das Wasser der Nerven, etc. Augsburg, 1859—Hasse, loc. cit.

marrow and brain. The sclero-fatty lesion may be, it is true, the last expression of an inflammatory work, but can also constitute a purely passive process; consequently sclerous atrophy of the nerves, like those of the marrow, and like that of the brain, ought not, in all cases, to be attributed to one and the same origin; as on the one hand there is no constant anatomical criterion which will at once permit the denial or affirmation of the inflammatory character of the alteration, it is less in the anatomical particulars than in the clinical phenomena that we must seek a response to this question; so, only to speak of the atrophy of the nerves, it sometimes presents from its beginning more or less lively pains, whilst under these circumstances it is absolutely silent, and reveals itself only by successive paralyses resulting from degeneration of the nervous cords; when the painful phenomena are very well pronounced and persistent, they reveal an active process, irritative or phlegmasial, which nothing authorizes us to admit when the disease is perfectly indolent and torpid. The importance of the pain in this point of view has already been noticed by Professor Hasse, and like him I hold this clinical criterion as the best test. In certain cases however, the consideration of the lesion itself is not entirely sterile; there are sometimes found vestiges of inflammatory injection which have marked the beginning of the pathological work. This is what happened in the very remarkable observation of Duménil, of which I will soon speak to you more fully.

Now, gentlemen, that we have cleared up the characters and forms of atrophy of the nerves, I can apply this knowledge to the patient we have before us; the paralysis, the study of the symptoms of which has enabled us to localize it in the separate branches of the spinal nerves, has its cause (atrophy of the nervous branches) which squares marvellously well with the precise diagnosis; the dissemination of the paralyses in the sphere of certain nerves to the exclusion of others, results from the fact that all the branches of the same plexus, and all the twigs of the same trunk, are not atrophied at the same time; precocious atrophy of the muscles, the loss of reflex movements,

the loss of electrical contractility, constitute in their union a pathogenic character of the lesion of the peripheral spinal nerves; you will observe it to perfect completion in the patient; each of the parts entirely paralyzed presents exactly these phenomena which a section of the nerves of the limbs produces. Finally, a daily observation of the march of the accidents demonstrates that the atrophy of the nerves extends itself little by little to the cords, which up to then have been respected, it is then progressive; this tendency to fatal invasion and generalization, which distinguishes atrophy of the spinal roots from muscular atrophy, commands the prognosis, as you conceive; and, in a nosological point of view, it specializes the malady; it is then essential that it should enter into the denomination of this affection. The expression, *progressive nervous atrophy*, which I have resolved upon, appears to me to fill all the required conditions.

In our patient the atrophy, despite its progress, remains up to now confined to the spinal nerves, and things are now so advanced that I cannot foresee that it will pass beyond this domain; but atrophy of certain of the cranial motor nerves may perfectly coïncide with that of the vertebral nerves; there is observed then in the muscles, vivified by the atrophied cephalic nerves, the same complex disorders which I have so many times enumerated to you—complete abolition of voluntary and reflex movement, abolition of electrical contractility; as to atrophy of the paralyzed muscles, it may entirely fail, and in every case it is *more slow* than in the limbs, by reason of the small number of sympathetic filaments which enter into the composition of the motorial cranial nerves. I have hitherto pointed out to you this interesting fact in studying progressive muscular atrophy, and will not insist upon it any more. But do not forget this very important symptomatic difference between atrophy of the spinal nerves and that of the cranial motors. This difference is striking in glosso-labio-pharyngeal paralysis, which results, as I have said to you, from atrophy of the bulbs of the motor nerves; then, even as the paralysis of the muscles ascends for

many months, they are not atrophied; they are from the second or third week in atrophy of the spinal nerves.

This study would not have the value for you which I hope it will if I did not take care to show you what are the relations of this malady, which I have characterized by a new qualification, with certain facts which enter into science under diverse denominations.

At our next Lecture we will continue the study of this subject.

## PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

ART. I.—AN ADDRESS UPON THE SUBJECT OF MEDICAL EDUCATION. Delivered by Dr. J. S. WEATHERLY, of Montgomery, Ala., before the State Medical Association.

Mr. President and Gentlemen of the Association,—In appearing before you to-day, with the desire of making a few remarks upon the great subject of medical education and the elevation of our Profession, I feel most profoundly my utter incapacity to handle the subject in the manner demanded by its importance. I tremble upon the threshold when I think of the great minds that have been and are still at work trying to solve the vexed problem of what is best to be done for the purpose of placing our noble science upon a proper basis in this country. But shall we stand still because others have failed or given up in despair? All great movements are necessarily slow at first, and what we inaugurate to-day may not receive its finishing touch for years to come.

The world is progressing, and each successive day throws new light upon some subjects that have heretofore been enveloped in doubt and uncertainty, and what may seem complicated and improbable to us of the present time, will be clear and simple

to those coming after us. It is therefore necessary for us to act now (for our own deeds live after us), so that our experiences and trials will not have to be gone over again, but be made to serve as beacon lights to assist our successors over the rough places which have already been overcome by us.

For years past the great complaint of American physicians has been, that although the science of medicine was evidently advancing, yet it was being so crowded with illiterate and incompetent men as to greatly retard its march toward that perfection which all good men wish to see it attain, and that if something was not done, and that quickly, too, it would soon be lost in the ample folds of quackery and empiricism, whose ranks are being constantly replenished from the innumerable medical colleges whose cheap tuition and low requirements for graduation induce men to become students of medicine who are not fitted either mentally or morally for becoming acquainted with a science second to none in importance, and more difficult than any other of being mastered in all of its various branches; a science deep-rooted and wide-spread, affecting every one, rich and poor. More deeply interesting to humanity than any other calling, dealing both with the physical and moral man. Strange indeed is it, that the people do not recognize the fact of its intimate relations with their welfare and happiness, and demand in tones not to be mistaken, that none but men of high culture, mentally and morally, should be admitted into this priesthood, whose business it is to watch over them in the journey of life, seeing that this life, which cannot be restored once it is gone, be prolonged to its fullest extent; that the lives of themselves and their loved ones be not terminated too soon by an unfortunate diagnosis or a failure to apply the right remedies at the proper time.

That the people of the United States submit more quietly to imposition from the Profession than any other country, is not to be wondered at. In Europe the governments protect both the people and the Profession; but here there is no help save what can be accomplished by the Profession itself. In fact, it has

been thought by some that our grand old science, hoary with age and venerable from its antiquity, would soon be stifled by the fearful amount of parasites that have been engrafted upon it. Some of them almost as old as the science itself. The question comes up then, shall we abandon it to these foul exhausters of its growth and life without an effort for its rescue? For one, I say not; and I am willing to lend my feeble support to any reasonable step looking to improvement, come from whatever source it may.

But let us be sure before we move that we are on the right road, for it is far better for us to stand still and reserve our strength than to have to retrace the steps once taken.

With the view of making an organized movement in opposition to the downward tendency of the Profession in this country, some twenty-three years since the American Medical Association was formed. It has been faithfully at work from that time to the present; and very much has been done by that body in elevating the tone of the Profession all over this country, and in directing the minds of medical men to the great necessity of reform. If its many recommendations could have been carried out, I should not now be occupying your time to-day. But its influence being exerted morally alone, and from the fact that the colleges have always had such large representations in its councils, and from the almost impossibility of getting uniform action between them (without which it is evident nothing can be done), few permanent and practical changes have been made. Every report which has been read before that Association upon the subject of medical education teems with earnest appeals and recommendations for reform, and if nothing else has been accomplished, it has done some good in creating an unusual desire that some action may soon be taken for placing the Profession of America upon an equality with it in other countries.

That it will take time, no one can doubt. Society is organized upon a different basis in this country to most others. In fact, we might say that everything here was an experiment, liable to constant change, and it is to be hoped also to great improvement as we grow older and get more settled.

That the American Medical Association, composed, as it is, of members from every part of our country, moved by no other desire than the love they have for the profession of their choice, will at some future time perfect a plan which will be acceptable and approved, I have little doubt. Whether it will come through the plan so ably advocated by its late distinguished President (Dr. Baldwin), one of Alabama's much and deservedly-honored sons, is yet to be seen. But come it will, I am confident, and from the efforts of that body; noble from its grand aims and its true catholic spirit.

That it will never recommend cheap medical education as a means of progress and reform, I am fully convinced, and for reasons, it seems to me, that must be patent to all thinking men.

The evident effect of cheap medical education would undoubtedly be to induce a great many to enter the Profession who, as Dr. Cochran says, "Study medicine as a mere trade, not as a liberal profession, and they are chiefly anxious to get a diploma, which gives them a quasi respectable position in the world with the least possible expenditure of time and money." Men who will not have the necessary groundwork naturally or by education, without which it is impossible to become scientific physicians. All cheap things are valued accordingly, and when it takes no more time, money, or preparation to enter what should be a learned profession than it does one which does not absolutely require much learning, they will reason that as it will probably sound better to be called doctor than tradesman, and as it will take no more outlay (or not so much) of time or money to acquire a profession than it will to get a trade, they will become doctors, and if they cannot succeed at legitimate medicine, they can swell the ranks of the quacks, and eke out a livelihood by imposing upon the credulity of the public, which, unfortunately, they soon learn is easily done. Do not understand me as underrating the importance of the trades; they have their legitimate position in the great fabric of society, and are just as important as the learned professions. All men, how-

ever, cannot become tradespeople or mechanics, neither would it be well for them all to become doctors.

Admitting that sufficient preparation will be demanded, and that no man who is not fully qualified will be allowed to graduate, it will not do away with the arguments of overcrowding an already overcrowded Profession, thereby lowering its dignity and diminishing the emoluments which should attend it; driving away from its folds men of intellect and energy to other callings which do not require so many sacrifices of personal comfort, and are more remunerative. Already business men laugh at the idea of making a doctor of a boy who is capable of making a living at any other kind of business; and parents always, in selecting professions for their sons, take law for their boys who have the brightest intellects, reasoning that it would be foolish to send a boy of promise into a profession where small honors and smaller fees await his efforts. Consequently many of us have felt our cheeks mantle with shame at hearing a profession, at whose shrine we have sacrificed our best years, made a by-word by the people as they pointed to men who had graduated even at our best schools, but whose ignorance was palpable to all. Under the present system of medical education as generally adopted in the United States, we find that the ranks of legitimate medicine (not counting quacks), is more than full, and that, according to the best statistics, we have about one doctor to every two hundred and fifty inhabitants who are able to pay for the services of a physician.

Now, will any system which is certain to increase the number very rapidly be of any benefit to either the people or the Profession? Will men of enlarged views and extensive preparation be persuaded to enter a Profession whose emoluments and honors are to be divided so infinitesimally? Will not many of the best men who are already in the Profession be forced to abandon a calling which, if legitimately followed, leads to want and poverty, whilst others less scrupulous will resort to methods which will put bread into their mouths, but will bankrupt them morally? It is from the ranks of the Profession that many

abortionists come, men who at one time were probably honest and honored, but driven to desperation, they become murderers, and live upon the sacrifices of innocent life. It has been said that the remedy for all these evils was in the hands of the Profession at large, and it is no doubt so to a great extent; but how can you eradicate an evil when the source still lives, and is constantly pouring its muddy stream into the great river? Can you purify a stream whose supply comes from innumerable rivulets of poisoned water?

Until the standard of medical education is raised, and its honors placed so high as to be coveted by the best and brightest intellects in the land, can we expect relief from the Profession alone, independent of the colleges? It is evident, then, that the Profession cannot be benefited by any process whose tendency is to create a greater supply of doctors than is necessary for the welfare of the people. In Europe the governments take care that the supply and demand shall be carefully regulated. The consequence is, that all over Europe a doctor is an honored man. In some places his diploma is considered as a patent of nobility. Alas! how different in this land of isms.

There are dwellers in the land of Utopia whose brains are always filled with strange exaggerations; men who dream of great things that they expect to accomplish in this land, where systems of philosophy are born and launched into perfection in a single night; where grand castles of matchless proportions are built without means; where everything seems to be perfect and possible. Some of these Utopians dream beautiful dreams; they improve wonderfully upon the ways of this world, and are astounded that the heathens of this real land of ours will not see things as they see them, or think as they do. Medicine, as well as other walks of life, has its Utopian philosophers. These men fancy, by making every man his own doctor, that humanity will be benefited. They are all humanitarians, and are close kin to that innumerable band of progressionists who are willing to cut loose from the traditions of the past and launch forth into all of the modernisms of the day, from conservatism

to radicalism, or from spiritualism to free loveism. They confound the benefits of free or cheap common education with free and cheap professional education, when there is really little comparison between them. Every sane mind will be improved, and the individual benefited by education, provided, however, always, that he or she is educated in a way to be of most service to oneself or to mankind in general.

It is not progress to educate people in a way to make them dissatisfied with themselves or with the station in which they are obliged to live. It is the education that teaches men and women to be better, more useful and industrious, that is needed, and not that which teaches them that honest labor is degrading. It does not follow, that to make every man proficient in law, medicine, or divinity, that the individual or humanity would be benefited. Division of labor is one of the great axioms of political economy, and has a special application to this subject. But the laborer must be sure of just and sufficient recompense, or he is a dull and inefficient workman.

Again, these Utopians are great clamorers for the rights of the people. Now, let us inquire how the people are benefited by cheap doctors. Do they want men who, commencing the study of medicine without much preparation, are rushed through a medical college in two short winters, and with such a little expenditure of intellectual labor or money as not to have been impressed with the great importance of their calling? No; the people, whose lives are to be entrusted to their medical advisers, want men who have been thoroughly impressed with the high responsibility which rests upon them when they become clothed with the mantle of the Profession.

It is to their interest to have men who have devoted themselves mentally and physically to the elucidation of the great truths of medicine. Truths deep and difficult to penetrate—calling forth all the energy of heart and brain to master. Little benefit would it be to the people to have doctors thrust upon them whose professional education had been obtained so easily as to have their minds groping in the dark, utterly unable to

comprehend the wonderful workings of Nature, the grand high priestess of medicine, standing at the door of our science, blinding the eyes of the ignorant, but an effulgent light to those who are capable of understanding her grand teachings and applying them to the eradication of disease and the prolongation of life. Human life! How lightly do some men value it. How light, alas! do some doctors look upon it. A toy with which they can play, or a sealed book into whose mysteries they have failed to penetrate. How many hecatombs of human lives have been sacrificed by the medical schools, which are vieing with each other in their facilities for launching out doctors with quickness and dispatch.

Prof. White, of Howard University, says, in a recent lecture delivered to his class, "Unless a change is wrought where I consider the source of the trouble lies—namely, in our medical schools; so long as it is held that there is a demand for cheap doctors in this country, and that an American can get as good a medical education in three short years, without any necessary preliminary mental training, as a Prussian or Austrian youth thoroughly drilled to methods of work and habits of industry can get in six years, or one good enough at any rate; so long as we make poorly educated doctors and nothing else, or we should do so at least if students themselves did not know better and act accordingly in exceptional cases." Again, he says: "Do we ever reflect that the multitudes of medical students in Berlin or Vienna are a reproach to our country?" It is common for advocates of cheap medical education in this country to refer to the European schools as examples of the great benefit of such a plan. Doubting whether the system of education which is found to work so well in Europe will ever be adopted or even be found applicable to this country, so different in manners, customs, and government, to those of the old world. Yet I am willing to admit that medical teaching and medical colleges in Europe are far in advance of the United States; and I think that they ought to be. They have had far more experience than we have had, and few of the governments being afflicted with spread-

eagle notions as to the rights of man, all laws have to be obeyed and respected. We therefore admit at the start that medical education in most European schools is superior and more thorough than it is in this country. Now, let us see if it is also cheaper. It is true, that the lectures of the professors in most foreign schools are free to the students. But what difference does it make whether he has to pay his money out for inscriptions and a variety of other things, or for lectures? Money he has to have, and that in no small quantity, or he cannot graduate in any European school that I have ever heard of. In France there are only three schools or faculties which are permitted to grant diplomas. Just think of that in the first place, as compared to the number in this country. One of these is located at Paris, one at Montpelier, and one at Strasbourg. The professors are selected with great care, after thoroughly proving themselves qualified to teach. Their salaries vary from eight-hundred to twenty-five-hundred dollars for each chair, and are paid by the Government. There are twenty-nine professors, and the same number of assistants. The lectures go on for eight months in each year, one session of five months, and one of three months. In addition to the lectures at the school of medicine, clinical lectures are delivered at the different hospitals. The student must inscribe his name once in every three months. At the time of taking out his first inscription he must deposit with the secretary: First, his certificate of birth. Second, his parent's or guardian's consent (should he be a minor) for him to study medicine. Third, a certificate of his morality. Fourth, his diploma of bachelor of letters. In addition, after his fourth inscription, he has to show his diploma of bachelor of sciences. He must study for five years and submit to five examinations. Some years since four years was thought long enough, but it was extended to five, upon the ground that the Profession was being too much crowded from the short time that it took to graduate.

Now, for the expenses at the free school of France; the student must deposit thirty francs for each of the sixteen inscrip-

tions, then he has to pay ninety francs for each of his five examinations, and two-hundred and forty for his thesis and diploma. To make this thing of expenses plain, I will present a table of expenses, which I extract from a recent letter from Paris.

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| 1. | Two Bachelor Diplomas | 150 francs. |
| 2. | Sixteen Inscriptions (30f. each) | 480 " |
| 3. | Four Years Dissections (20f. each) | 80 " |
| 4. | Three Final Examinations (30f. each) | 90 " |
| 5. | Five Doctrate Examinations and Diploma (90f. each) | 450 " |
| 6. | Examination of Thesis | 240 " |
| 7. | Average cost Thesis | 400 " |
| 8. | Doctor's Gown | 10 " |
| | Total | 1,900 francs, |

which is equal to $380 in gold. Five years is the average time, but few get through earlier than six, while many are seven years.

The actual expense, you see, paid for instruction or for the privilege of attending lectures with the view of graduating, is more than double what it takes to graduate at the most expensive school in the United States. In addition to this, we must take into consideration the amount of money spent in getting ready to commence the study of medicine. For although the most of the Universities are free (so-called), yet we find that the actual outlay of money is so great that comparatively few young men can afford to become sufficiently well educated as to even commence the study of medicine. Then the amount that has to be expended for board, clothing, etc., for the five or six years spent in study, is quite an item of expense. It is true, that the professors are independent of these fees paid by the student, and it is probably best that they should be. I am not arguing as to how the professors should be paid, or what amount they should receive for their services. My object is to show that cheap medical education is not the plan by which good and learned physicians are to be made, and I wish to make it plain, that in foreign countries where they have had the experience of centuries in devising the best methods for teaching, and where

the governments pay special attention to the preparation of its doctors, that cheapness or great facilities for entering the Profession are not considered as essentials, but rather as drawbacks; that great preparation and long study, necessarily entailing a heavy expenditure of money, are, however, considered as paramount. The inducement which is held out for this great outlay of time and money is, that the ratio of supply and demand is so carefully regulated, that once a young man has his diploma secure, he is almost sure of a competency, and has no fear that he will be compelled to abandon a Profession which has cost him so much to engage in other pursuits for the purpose of making a living. Again, it has cost him so dearly as to be an object of pride, not to be cast aside as a useless title. In Germany we find about the same system prevailing. The expenses probably are not quite so heavy in Prussia, but much more in Austria. The preliminary examinations are more searching, and so many obstacles have to be overcome before and during the time of study (which lasts from four to six years), that few are willing to encounter them. The professors are all appointed and paid by the Government. In Berlin the number of professors consists of twenty-eight, with thirty-nine assistants. The salaries vary from five-hundred to two thousand dollars. The student has to pay as he does in France, so that when he graduates, even in that cheap country, where everything is very cheap when compared to this country, the actual amount of money paid out amounts to more than it takes to graduate at any first-class school in the United States. Now, you might suppose that after all this preparation and expenditure of time and money, for he has to be in actual attendance upon lectures for ten months out of each year for five or six years, that he would be allowed to practice upon showing his diploma. It is not so; he has now to submit to a more strict and rigid examination before the State examiners, which board is appointed by the Government, and is entirely independent of the colleges. This entails upon him still more expense.

It is clear then, it seems to me, that it is sheer nonsense to

compare free or cheap medical education in this country with the so-called cheap medical education of France and Germany. Here two short courses of lectures, and (it is not even obligatory to attend them) comparatively no preparatory training. And if the system recommended by the Faculty of the Mobile College should meet with approval, no expenditure of money will be required. Then what are we to expect? Will our noble and God-like Profession be held aloft upon the shoulders of intellectual giants, or will it not be dragged down lower and lower by the pigmies who will enter it because it requires neither capital nor intellect to become a doctor?

In Great Britain they make no pretensions to cheap medical education. The professors are paid by fees collected from students, and the expense is simply enormous, amounting to much more than in any other country; while the requirements made upon the students are as strict as on the continent. To show what opinions other men entertain who have given the subject great thought, I propose to make a few quotations, which I find published by Dr. Gaillard and sent out in a circular from the Louisville Medical College. Sir Charles Bell says "That Government should equalize the fees paid for lectures, because inferior teachers offer to teach at half price. Their recommendation is, that they give their certificates cheaply." Prof. Caldwell says: "It may be said that nothing great or useful can be done on the score of instruction without money. We do allege this openly and challenge refutation. We simply contend that the laborer is worthy of his hire; the more work he does and the better he does it, the higher the wages he deserves, and must receive; and those who assert to the contrary are uninformed or insincere." Dr. Daniel Drake says: "I believe a low price to be calculated, in the estimation of the Profession, to disgrace a school; it creates the impression that the trustees believe the Profession cannot attract students but by saving them money." M. Guizot says "That cheap professional education multiplies in the Profession men of the second order, and the obscure and idle multitudes." Adam Smith, in his let-

ter to Dr. Cullen, "declared that the reduction of the cost of professional education, whether by means of low fees or public endowment, below the standard of its real value, would so increase the number of professional men that their necessities would oblige them in general to content themselves with a very miserable recompense, to the entire degradation of the now respectable professions of law and physic; that the effect would be to abandon the professions to an inferior class of practitioners, with whom no community could safely trust its health." "We trust," he says, "our health to the physician, our fortune, and sometimes our life and reputation, to the lawyer and attorney. Such confidence could not safely be reposed in people of very low or mean condition. Their reward, therefore, must be such as may give them that rank in society which so important a trust requires." My last quotation will be from a living man, whom you all know. I mean Dr. Cochran, of Mobile. He says, in a speech delivered at Montgomery only one year ago upon the subject of medical education, "The law of compensation is universal; if you want anything in this world, or indeed in any other, pay for it and take it; but remember it must be paid for, it cannot be had on other terms; the fates are never cheated; who bears the cross shall wear the crown." Our learned and most efficient secretary also thinks that he has a plan by which all trouble will be obviated, and the flag of reform be boldly flung to the breeze. It is to have a board of censors appointed in each county of the State. Now, in my opinion, if this were practicable, it would not meet the difficulty. We have not, and probably never will have, societies in half the counties of the State, and if we had, I have no idea that the authority of such boards would be respected unless we have legislative enactments conferring power upon them. This is impossible now and for all time, until we educate the people up to the point of protecting themselves against quacks and impostors instead of encouraging them. The only practicable Board of Censors would be that recommended by the American Medical Association, and which I had the honor to lay before you at

your last meeting. Since then I have written to Dr. Davis, the chairman of the committee appointed by the National Association, and will read you his letter. It is not very encouraging as to the speedy adoption of the plan recommended, still some good may come from it after awhile. I also, looking to the probable adoption of the resolutions by this Association, drew up a bill which I had introduced for the purpose of testing the temper of the Legislature; and also, in case it passed, to make the Board effective. I read you a copy of the bill; I left out everything which it was thought calculated to defeat it, thinking that it would be better to trust to future legislation than to ask too much at first. The bill was referred to the Judiciary Committee, who did not think it of sufficient importance to make any report upon it. I feel satisfied that no action of ours, unless we have the power to have offenders punished by law, will be of any avail; still I think it would be well to pass these resolutions and make the trial. Admit that we can get an effective Board of censors in every county in this State, would it be right for us to flood other States with the material which this system of free or cheap medical education is certain to bring into the Profession? It is all sophistry to say that we must have cheap medical education for the purpose of allowing worthy young men an opportunity of entering the Profession who are too poor to pay their way through a medical college. No one who has the mind, education, and energy to make a successful practitioner, will ever be kept back for the want of means to defray his expenses; he will get it in some way, and if he has to make great sacrifices for the purpose, it will enure to his benefit in the end. How many rich men did any of you ever know to study medicine with the intention of following it as a profession? Our ranks are made up of poor men, who have had to struggle hard to get their diplomas, and these men appreciate it for that very fact. It is dear to them as the apple of their eye; and the honor and dignity of their calling is more than a mere sentiment with them. You will find few of these old soldiers of the Profession who will advocate cheap medical

education. I believe it to be the duty of this Association to assume high ground upon this question. The tone and character of the Profession in this State is supposed (and it ought) to be regulated by this Body. No partisan feeling for a moment should be tolerated; for in the discussion of great principles, self or personal inclinations should be entirely lost sight of; and as I have now come to a point in which I shall have to allude to the late action of the Faculty of the Medical College of the State of Alabama, I wish to say, in all candor, that so far as I am concerned, if I know myself, personal feeling or ambition has had nothing to do in prompting any action in which I have taken a part. I claim now to be as good a friend as the College has, and for its Faculty I have the highest esteem and respect, and I am sorry that my honest convictions force me to differ with them upon this question. This may be, and probably is, a matter of indifference with them, still I must say that I think the Faculty has committed a great error in abolishing its fees, especially without insisting upon a more thorough preliminary training previous to matriculation, and a higher standard of proficiency for graduation; so as to counteract in some measure the evil of offering inducements and facilities for entering the Profession to great numbers of illy-prepared men. It also has the bad odor of underbidding other colleges, without showing to the world that the College is upon an equality with the best in the land, and that its diploma must be respected wherever its recipient chooses to go, whether it be in Massachusetts or California. I say again, that personal ambition (for I know that it has been said that it did) has not prompted my opposition to the action of the Faculty. On the contrary, personal feeling and inclination would have moved me to have adopted a different course; for it is always unpleasant to differ with our friends. But when great and vital principles are to be discussed, and measures are to be adopted that not only affect us to-day, but also future generations, it is our duty to take a decided stand, and to adopt rules that will redound to the honor and lasting reputation of this Association. I am willing myself to

go on the record as opposed to cheap medical education in this country without the corresponding requisites which are deemed indispensable in Europe.

I believe it will be alike detrimental to the good of the Profession and to the welfare of the people; I am convinced also that it is the bounden duty, as well as the right of this Association, whose business it is to guard with a zealous care the honor and dignity of the Profession in this State, to speak out in unmistakable language upon all questions relating to the action of its different members, especially when that action is of a public character. It has been said by the Mobile Medical Society, acting in behalf of the Faculty, that the Profession at large had nothing to do with colleges, and should not meddle with them, but attend to its own business. Prof. Cochran, however, for whom we all have the highest esteem, says that the Profession at large is more to blame (referring to the low standard of medical education) than the colleges. His words are: "They have had the power to control the evil of which they complain, and they have failed to exercise it." I agree with the Professor that it has the right, for power carries right with it generally. I believe, moreover, that this Association, as the representative of the Profession at large in this State, when assembled in solemn council, has the power, and that it ought to say what is proper and ethical for any of its members, be they professors or not. I think that as we once endorsed the College fully, and promised to sustain it individually and collectively, we now should say whether we still endorse it or not, after the complete revolution that has come over its management. Of course we cannot (and I presume no one entertains such an idea) control the action of the Faculty, as I believe the College is a private institution. They have the right to act for themselves, but they cannot expect to be sustained by this Association against its own judgment.

I will say here, that I am not opposed to professors teaching for nothing, if it be their fancy; I can't say that any one ought to object on their account. That is not the point that I desire

to make. I am also inclined to the opinion that it would be better, where teachers work for money, to have their salaries independent of the fees paid by the students. At the same time, I think the student should pay well both in time and money for his medical education.

I have tried to show elsewhere that it would not do to compare cheap, common, or popular education with professional education. . The one is actually necessary not only for the common good and the good of the individual, but for the protection of society itself. I presume, however, that no one will argue that it would be better to convert the world into a great doctors' office, and to set every one to giving his neighbor physic in the most scientific manner.

The correct plan, it seems to me, is for the student not only to spend plenty of time, but also money, for that is the real touchstone to the value of everything in this world; and then he will be in a condition to appreciate what has cost him so dearly. Not only that, the people will be taught, as they are in Europe, to respect a Profession whose honors have to be won at so much cost and labor. I believe also that it is the plan by which we are to have good teachers. *They must be paid so well that the most learned in the Profession will be willing to devote their time and knowledge to teaching.*

In Europe, notwithstanding it has been said that the salaries of the professors were a mere nothing, I have shown that they are well paid by the Government; they are also remunerated in another way. For the honor of being a professor in a European school brings money with it by the increase of practice, for the people know that no man can occupy a professional chair in a foreign university without great learning and proficiency in his particular branch.

In closing, I must ask pardon for trespassing so long upon your time; I feel that it is probably the most important subject that we will have for consideration, and I hope there will be no hasty or immature action in the matter. It is a subject worthy of your calmest and wisest deliberations; and I most sincerely

wish for the Faculty and the Association to work together in harmony for a common good; and I am anxious for some plan to be devised that will be agreeable and beneficial to all parties; and I am willing to support any measure looking to this end.

## ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

Mt. Solon, Va., 1871.

Mr. Editor,—From the experience of the past year I am inclined to the opinion that the electrical state of the atmosphere has far more to do with the etiology of neuropathic disorders than has hitherto been admitted.

The fact is patent to the most casual observer, that during the year 1869 there was an unusual dearth of the usual phenomena of a highly electrified, or even a normally electrified condition of the atmosphere in a section of the country, of which Virginia forms a part, and especially the Valley of the Shenandoah, whence I write. A protracted and general drougth prevailed during the summer months, there being scarcely a thunder-storm during the entire season. In the autumn there was no appearance of the aurora borealis. During the year 1870, however, we had every evidence of a very highly electrified state of the atmosphere, seemingly supplemental to the preceding year. Thunder-storms were both frequent and frightful; the lightning in many instances being destructive to lives, stock, and buildings. In the autumn the aurora borealis was not only more frequent in its appearance than I have ever before witnessed, but vivid beyond the most imaginative fancy. Its usual perturbating effects on telegraphic apparatus were well marked, enabling operators to transmit messages without the use of their batteries.

But now, to return to the subject in question. During the year 1869, according to my experience, neuropathic affections, either of a neurosthenic or neuro-asthenic type, were less frequent, or at least not more frequent than during any preceding year. During the year 1870, however, my experience has been very different. In my practice during the last year the neuroses have been most frequent, and in some cases most intractable. Indeed, it seems to me that I have encountered more nervous ailments during the last year than during ten preceding years altogether. A very large proportion of my practice has been on neuropathic affections, a vast majority of these occurring without any apparent substratum of morbid action as a predisposing cause. The trouble seems to be in the nerves and nervous centres, and in them alone. I have met with nearly every variety of neuralgia, hemicrania, otalgia, tic-douleureux, intercostal neuralgia, gastralgia, enteralgia, lumbo-abdominal neuralgia, metralgia, sciatica, myalgia, etc. Neurosthenia and nervous asthenia, with all of their phenomena of excitation and depression, and hydra-headed ailments and complications have presented themselves.

I can account in no other way for the marked increase in the prevalence of these disorders except by attributing it to a very highly electrified condition of the atmosphere. The equilibrium of other meteorological conditions seemed to be unaffected. Their prevalence cannot be assigned to any continued dampness of the air; for although thunder-storms were frequent, and often terrific, yet between storms the weather was beautiful. We had not a single continuous rainy spell, with the exception of the great flood in the latter part of September, yet a great number of persons were affected, who, using their own words, "never before knew what neuralgia was."

Whilst most physiologists deny, but others seem to contend, that electricity and nervous influence are identical, all agree that electricity, under certain circumstances, will supply a want of nerve force; that it will restore it when in abeyance; that it will reïnforce it when languid; and that it will exalt it when

normal. A great many of the neuroses of the past year were doubtless due to a continuous super-excitation, and in many cases a resultant depression incident to the surcharged electrical state of the atmosphere, constantly lashing up to over-duty the nerves and their centres.

The treatment, too, in some measure, strengthens this theory. In those cases of neurosthenia the usual remedies—opium, aconite, etc., were beneficial, but required to be administered in heroic doses. The preparations of opium, to be beneficial, had to be administered in doses at least double the amount that I had been in the habit of prescribing. I have seldom prescribed sul. morphia to adults in less than half-grain doses. A few weeks since I administered three-fourths of a grain of sul. morphia at once, with the hypodermic syringe, to a woman of thirty-five years of age for severe gastralgia without the slightest evidence of its being an overdose; and besides, this woman had taken several smaller doses during the day, which had been prescribed by another physician. A few weeks ago, to a man aged fifty, suffering from gastralgia, I administered with the hypodermic syringe two-thirds of a grain of morphia, having just forty-five minutes before given him one-half a grain by the mouth. I have just discharged a very stout young man whom I attended two weeks for gastralgia, and to whom I was in the habit of administering morphia hypodermically in half-grain doses daily, and on the occasion of one of my visits the usual dose afforded very tardy and incomplete relief, so great was his suffering. On this occasion, to have afforded prompt and complete relief, I should have given with the hypodermic syringe *one grain.*

On the contrary, in those cases characterized by the phenomena of nervous asthenia, and in other diseases, such as pneumonitis for instance, over which this neuro-asthenic condition had cast its livery, iron, quinia, nux-vomica, and brandy, generally effected a cure; but to be beneficial, required to be administered in equally ultra doses.

Amongst other morbid phenomena whose origin might be

attributed to this abnormal state of the atmosphere, I will only mention the unusual frequency of neuralgic dysmenorrhœa, sterility in the newly-married, abortions, and premature labor. That all of these have been of more frequent occurrence than usual, I have the data to establish. I am of the opinion that atmospheric electricity will be found to exert a far more deleterious influence over the well being of conception and gestation than has heretofore been granted.

In regard to the effect that this abnormal atmospheric state has had upon the mind and mental faculties, my observations have not been sufficiently well taken to decide. It seems to me, however, that the matrimonial epidemic which has been prevailing in this section with such marvellous intensity in all classes of society, has some connection with the state of the air. I am one of those who firmly believe that the procreative desire is the great prompter to matrimony in eight out of every ten cases, the women and clergy to the contrary, notwithstanding; and it would not be assuming too much, perhaps, to ascribe an excessive development of the passions to the same agency that is lashing to fury the nerves and their centres. But be this as it may, a call, a certificate, and a clergyman, have been the order of the day in this section for the last year, and in the total absence of any other favorable circumstances for marriage in very many cases, I am disposed to assign this as an incentive.

Should these recent votaries at the hymeneal altar discover by-and-by that they have been the dupes of an electro-orgasm, and fail to realize that connubial bliss on which the poets love to dwell, a sad and unhappy state of affairs might supervene. But this is a theme for the psychologist rather than for the physiologist and pathologist. Yours very truly,

J. E. Lockridge, M. D.

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Augusta, Ga., 1871.

*Dr. Gaillard:*

Dear Sir,—You will doubtless recollect the publication of an article of mine in the December number of your Journal for

1868 on the use of *artificial gastric juice* as a solvent for the false membrane in diphtheria. At that time I deemed the practice as exemplified in the case then reported, both new and *original*, and, from the fact that it was amply sustained by physiologico-chemical facts, I anticipated a speedy trial of its merits by American physicians. In this I have been mistaken. I have therefore furnished the Profession again, through the same medium, with another illustration of the adaptedness and efficiency of solvents of the false membrane for the relief of that class of diseases.

On reading the paper you will perceive that I lay claim to the originality of this "new departure," having already practiced it upon the living subject before the earliest publication in this country of the experiments of Brichetau and Adrian on the solubility of false membrane in lactic acid, etc. These chemists experimented in the summer of 1868; the earliest notice of Weber's experience with lactic acid (the addition of which to the pepsin solution I also spoke of) is contained in the "Lancet," June 19, 1869. My case was treated in September, 1868, and the manuscript was in the hands of the publisher in October, although not published until December, 1868.

I speak of it as a "new departure," because the certainty of control over the fibrinous formation in croup and diphtheria is, under its judicious use, far greater than by any system or measure hitherto devised. While it cannot be said to be absolute, yet it is *material*; experience so far confirms all that has been claimed for it. It needed, however, a foreign introduction to bring it to the notice even of *your exchanges*.

If you think any credit is due to the "Richmond and Louisville Medical Journal" for having first given to the public an illustration of a new and successful mode of treatment, which is even now confirmed by professional experience abroad, you can notice the matter as you deem best, giving me that alone which you conceive to be due. The only desire I have in the premises is that, when this measure is incorporated among the known principles for the successful and simplified management

of croup and diphtheria, I may apppear as one among the first, if not the first of its inaugurators.

Very respectfully,

WILLIAM H. DOUGHTY, M. D.

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*Dr. Gaillard:*

Dear Sir,—The following I communicate to you not for the sake of publication, but it may interest you as a short sketch of an exceedingly rare case—one seldom written upon, and not met with in every-day practice. In consultation with a physician of considerable local eminence, he declares though having seen descriptions, yet he never saw such a case.

Case of loss of power of language of ten months, and subsequent on an attack of vertigo followed by paralysis, loss of speech, etc.

Mrs. A. B., aged twenty-two years, married, six months pregnant (had given birth to two children, one at seven months and the other at eight months), in good health; habit more full than usual for her condition, after partaking of an unusual hearty breakfast, was prostrated by an attack of vertigo, followed by a loss of consciousness, paralysis, and loss of speech.

After recovering her consciousness, the partial use of her limbs, of her speech at first, she could only use single words. When asked questions, would reply with a word not relevant to the question. She seemed incapable at first of any emotion, and it was several days before she shed a tear; complained when she become conscious of pain in the temples, more severe on the left side; also pain in limbs of the paralyzed right side. There was some suppression of urine.

*Treatment.*—Cups to the base of the brain and back of the neck; cathartics and diuretics. Considerable improvement after several days in the use of the limbs; memory now good, but can recollect nothing about the attack. Before and up to the very moment of her prostration her memory of the past is perfect.

But now when asked the names of articles or persons, says

yes or no, cat or dog; yet she says she knows well what it is, and can repeat after you. She cannot read or write.

She was kept on diuretics, counter-irritation to the back of her neck. An occasional cup when pain in the head with buzzing in the ear was distressing. The physicians thought, after her confinement, she would recover promptly. The loss of the power of language was the sequel of the primary attack.

After being delivered of an eight month's male child, she had a good getting up, and was placed on tonics, as of quinine strychnia, and iron, as her general health had suffered from the attack. This treatment was continued for weeks and months, with restoration of all the powers, except that of language.

At this time, two months from the first attack, she has considerable command over her language; with an effort she can make herself understood. Can read and write, but with some effort; strong disposition to pass over small words. Her improvement has been very gradual as nature would establish itself and overcome this sad trouble.

Yours truly,
W. W. Griggs, M. D.

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Norfolk, Va., 1871.

*Dr. Gaillard*:

In your note on the "Discussion of Diabetes," in the May number of the "Richmond and Louisville Medical Journal," you observe that "no one has mentioned the fact that the amount of urea (tissue-waste) is much increased in diabetes, mellitus," etc., etc. It has been lately shown by the experiments of a French physiologist that digitalis diminishes the amount of urea in the urine; and it has occurred to me that this drug could be beneficially employed in treatment of diabetes to arrest the emaciation attendant upon that disease.

Respectfully yours,
W. H. Shepherd, M. D.

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Greensboro', Ga., 1871.

*Prof. E. S. Gaillard, M. D., Ky.:*

Dear Sir,—I treated *another* case of *breech* presentation by

the method indicated in the February number of the Journal with entirely satisfactory results a few days ago (24th inst).

Two weeks ago I removed a living *calf* from the mother by the Cæsarean section after she had expired. It did well up to the fifth day, when it died from the injuries received from its foster-mother. It was about the eighth month of her pregnancy. It would have lived and done well but for the injuries. To-day I have removed a *grain* of *wheat* from each ear of a child three years old after they had been impacted there for *seven* months. Scoops, forceps, etc., had been tried in vain. I used a Davisson syringe, the nozzle of which was held one inch from the ears, and a stream of water thrown forcibly into them.

Truly your friend,

JOHN E. WALKER, M. D.

## REVIEWS AND BIBLIOGRAPHICAL NOTICES.

**"Judex damnatur cum nocens absolvitur."**

ART. I.—COUNSEL TO MOTHERS. By P. HENRY CHAVASSE. Philadelphia: Lippincott & Co. 1871.

There has never been, since the inauguration of printing, a period, during which mothers have not desired "counsel;" or have been supposed, at least, to be in this commendable and attractive frame of mind. As the result of this, the Press has always teemed with the productions of affectionate philanthropists who, as is usually if not invariably the case with modern philanthropists, are ever ready to give to "anxious seekers" the benefit of their wares and views, provided that those seekers give in return, and handsomely, a full equivalent of that vulgar medium which others less noble than philanthropists are prone to desire, when they part with their marketable articles or merchantable property. This sentiment may be regarded as

very unkind or very unjust to that problematical section of the human race termed, in the indulgence of a pleasing fiction, philanthropists, but it is one representing the truth in the judgment of those unpoetical and non-visionary souls who "speak of men as they find them, and heed not what others may say;" who adapt their diction to the actual scenes of current life, and who are not wont in maudlin moods to study their phraseology in the vocabulary of Utopia. That there are noble souls now (as there have always been) ever ready to sacrifice self and all appertaining to self in the execution of a noble and heroic conception, is unquestioned by those familiar with the lives of the great, and familiar with the warmer, livelier instincts of their own breasts; but these noble ones are not of the class who offer their wares, material or immaterial, for a price. Be this as it may, the author of this volume advertises to give counsel to "mothers," and it is found that he desires as a reward, not that conscious gratification which fills the soul after a noble deed, but a certain number of vulgar little pieces of alloy contributed by each perturbed reader, whose mental peace is pleasantly supposed to be attained by a due study of his philanthropic advice. To those who, with Pope, believe that "a little learning is a dangerous thing," it is unnecessary to say that mothers need not the "counsel" which, when received, is marvellously like Iago's description of his purse: "'Tis something; nothing." To those, however, who seem to think that "mothers" are like so many Elijahs, waiting for their support from every raven on the wing, it may be well to recommend this little volume. It is certainly the best of its kind, and if such works are useful in a household, this can be confidently recommended. It is clearly and agreeably written; the directions given are correct and useful; and if the work accomplishes no other good, it will at least teach the "mothers" how to regard the Winslows, and Helmbolds, the Ayers, and the Jaynes, etc., whose nostrums billow the land of our cemeteries with graves, and whose advertisements soil the pages of the secular press, which disgraces itself by their insertion. The

Messrs. Lippincott have published this volume in an excellent manner.

ART. II.—HANDY-BOOK OF THE TREATMENT OF WOMEN'S AND CHILDREN'S DISEASES ACCORDING TO THE VIENNA MEDICAL SCHOOL, WITH PRESCRIPTIONS. By Dr. EMIL DILLENBERGER. Philadelphia: Lindsay & Blakiston.

The reader is particularly recommended to obtain a copy of this little volume. It is a *magnum in parvo*. In 240 octavo pages the reader is enabled to keep himself fully abreast of the times in their relations to the subjects analyzed in this volume. The style is simple, clear, lucid, and free from theoretical discussion. Useful prescriptions designed to meet fully the indications, as studied by the revelations of modern pathology, are liberally and conveniently incorporated with the text. While with many, fixed prescriptions are justly repudiated, these herein given will be valuable to those physicians who use the prescriptions of others, while they will serve as useful hints and reminders to those who prefer always to adapt their own prescriptions to the various indications presented in the history of each case. There is an appendix, by the examination of which the reader is enabled briefly, but successfully, to compare the Vienna School of Practice with that accepted in England and America. No one will regret the small outlay for this volume. It is well issued, as is usually the case with all volumes published by this old and popular House.

ART. III.—A MANUAL OF MIDWIFERY, WITH SIGNS AND SYMPTOMS OF PREGNANCY—OBSTETRIC OPERATIONS AND DISEASES OF THE PUERPERAL STATE. By ALFRED MEADOWS, M. D., London. First American from the Second London Edition, with Illustrations. Philadelphia: Lindsay & Blakiston.

The title of this work is so full that the general scope and tenor of the volume are clearly developed. The work certainly has the rare merit of being comprehensively and yet concisely written. The science and art of midwifery, as contemporaneously accepted, are very creditably and lucidly presented.

The work is an ordinary octavo of only 475 pages, and yet in

this space the author has compressed most of the information necessary in the study of the subjects investigated; giving as a result economy in the expenditure of both time and money to the purchaser. There can be no doubt but that this manual will be generally accepted, and that it will be regarded (as it deserves) to be a brief, convenient, and compendious guide in the study and practice of the obstetric art. It is well issued by the publishers.

ART. IV.—RELATIONS OF UREA TO EXERCISE. By AUSTIN FLINT, JR., M. D. New York: D. Appleton & Co. 1871.

This volume is intended to prove by a record of actual experiments that the amount of urea discharged in a day is in a direct ratio, other things being equal, with the amount of exercise endured. The experiments recorded were made during and after the walk of the pedestrian Weston, in the summer of 1870. Prof. Flint was aided in his labors by Drs. R. O. Doremus, Oscar Law, J. C. Dalton, W. H. Van Buren, A. B. Mott, A. Flint, Sr., and W. A. Hammond. The tests and results are interesting, and demonstrate what has usually been believed, that muscular exercise and the elimination of urea are in a direct ratio to each other. The work is beautifully issued.

## MISCELLANEOUS NOTICES.

ANNUAL REPORT OF QUARANTINE OPERATIONS IN CHARLESTON HARBOR, S. C., for the year ending October 31, 1870. By ROBERT LEBBY, M. D., Health Officer.

This pamphlet demonstrates clearly the advantages of a strict quarantine, and the danger of laxity in the administration of quarantine laws. Suggestive and authentic examples are given of the truth of the doctrines taught. No one can read Dr. Lebby's statements, set forth in simple and impressive language, without being ready to endorse his tersely expressed conclusion; "a strict quarantine is a blessing to a community; a lax quarantine is a nuisance to any people." This declaration does not come from an inexperienced novice, but from an accomplished, efficient, and long tried officer.

TRANSACTIONS OF THE EIGHTEENTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF NORTH CAROLINA, HELD AT RALEIGH, N. C., May, 1871.

Dr. W. G. Hill, of Raleigh, North Carolina, was elected president, and the Society is to hold its next meeting at Newbern on the second Tuesday of May, 1872. The volume contains good papers from Dr. R. J. Hicks and E. Burke Haywood, with an address of Dr. R. L. Payne; reports of cases from Drs. W. T. Cheatham and Willis Alston. The papers contributed are in the main good, but the volume is not creditable to the Profession of the State. The papers are too few, and too limited in scope, and the record of attendance evinces an unfortunate neglect upon the part of the physicians of North Carolina of their parent Society. As a corps, the medical corps of North Carolina is most excellent, and it is to be hoped that in their next volume they will do ample justice to themselves and justice to their State.

SARCOMATOUS FIBROMA OF UPPER JAW (EPULIS) SUCCESSFULLY OPERATED UPON. By R. A. KINLOCH, M. D. Charleston, S. C.

Professor Kinloch has in this paper presented a most interesting case. The tumor removed was unusually large, the operation formidable, and the result excellent. It is to be regretted that the accomplished operator and writer did not enter more fully into the pathological texture of the tumor removed. In the confusion created by Mr. Paget's descriptions of myeloid growths; by Lebert's differential diagnoses of such growths from those containing, in addition, cancer cells; by Kölliker's tumors made up of many-nucleated corpuscles; by Symes's fibroids; by Lawrence's and Hawley's cases, it is impossible to conceive what the term epulis now means, unless the description be full and accurate. Dr. Kinloch's case seems, in the histological character of the tumor, to have been allied to that species of growth which Virchow denominates sarcous and sarcomatous. All interested would do well to obtain a copy of this report.

COMMENTS OF THE MEDICAL PRESS ON THE ALLEGED MALPRACTICE SUIT OF WALSH VS. SAYRE.

There are embodied in this pamphlet extracts from most of the leading British and American medical journals in their reviews of the interesting and celebrated case mentioned. These extracts, as they should be, are highly laudatory, not only of Dr. Sayre's course in connection with the operation performed, but they are equally and justly commendatory of his tact, skill, and general bearing during and after the trial. If shameless and designing culprits, such as those mentioned or unhooded in this suit and that brought against Dr. S. D. Gross, could receive similar punishment, the medical profession would receive more of that honor and respect to which its members are entitled. The report of Dr. Sayre's case was received, but seems never to have been publicly noticed. It is a valuable volume, and physicians should obtain, if possible, a copy of it.

REPORT ON THE PROGRESS OF SURGERY. By E. A. CLARK, M. D. St. Louis, Mo.: Levison and Blythe, Printers. 1871.

Those who are anxious to learn in a brief and agreeable manner the improvements made during the last decade in surgery, would do well to obtain this work from the publishers. There is much to be learned in this excellent little volume, and the knowledge is imparted efficiently and acceptably. Professor Clark died suddenly during the past summer, and with many other writings, leaves this pamphlet as one of the monuments of his untiring activity, energy, and enthusiasm.

THE CATALOGUE OF THE MEDICAL COLLEGE OF ALABAMA.

This pamphlet shows that this Institution is under the management of an excellent and accomplished Faculty. They are gentlemen of cultivation and marked professional proficiency. The Faculty charge nothing for their lectures, but have increased the graduating fee from $5 to $25. It is immaterial whether the Faculty charge $5 for matriculation and $20 for professors' tickets, or $25 for matriculation and no fee for the tickets; the result is the same—viz., that the Mobile Medical

College has reduced its former fees of $145 to $25, and that it had become the lowest-fee medical school in the United States. This is very much to be regretted. The Faculty have, it is believed, erred fearfully in judgment. They are personally beyond suspicion, and are entitled to the utmost confidence professionally, but it needs but little foresight to predict that their course will meet with unqualified condemnation. Fortunate will it be for them if they fail in their present policy; this will necessitate a radical change, when they will receive a just and generous support.

MRS. HILL'S NEW COOK-BOOK—A PRACTICAL SYSTEM IN TOWN AND COUNTRY, WITH MISCELLANEOUS AND MEDICAL RECIPES. By Mrs. A. P. HILL, widow of Hon. Edward Y. Hill, of Georgia. New York: Carleton, Publisher. 1871.

It is not infrequently the case that one can confer a better service upon physicians and those for whom they labor, by calling their attention to a really excellent work on cooking, than by presenting to them elaborate analyses of volumes on the absolute science of medicine. If "an ounce of preventive is worth a pound of cure" in any connection, it is in connection with the evils of bad cooking, for this is one of the protean causes of dyspepsia, with its host of hydra-headed tormentors. Indeed, some one has well said, that dyspepsia is the remorse of a guilty stomach—guilty of error in the quality as well as in the quantity of food. Hosts of such cases would have been unknown had there been attention to correct and judicious cooking.

This work of Mrs. Hill can be recommended to all readers of this Journal and their multitudes of friends with entire confidence. Each household should have a copy of the work. It has been pronounced by a very astute and discriminating female critic most excellent, and the work deserves fully all the encomiums she has been pleased to bestow upon it. In its material and arrangement there is evidence of a refined and educated taste; the teachings of one practically accomplished; intellectually and morally attractive.

Mrs. Hill is the widow of an erudite and learned jurist, who was long an ornament of the Georgia bar. Left in pecuniary distress by the loss of her husband and the sad disasters of the late war, she is struggling like a noble woman to meet the demands made upon her by a large family of children. The publication of this excellent work is one of the means adopted by her to protect and rear the young and helpless flock surrounding her desolate hearth. Is there any reader whose heart will not bound at the practicability of aiding a noble and struggling woman? Let each one feel, and justly feel, that his offering is not a charity; it is the reward of merit; it is the sum given in a judicious purchase.

The work is abundantly worthy of support, and its accomplished and able authoress should not be allowed to need, for an hour, a host of applicants for its purchase. There are noble and generous men who are always anxious to know how they can encourage and protect a tried and cultivated woman. Here is their opportunity. The price of this work is $2. The address of Mrs. Hill is Atlanta, Ga.

## CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

*A Refreshing Beverage.*—Dr. Waller Lewis, in describing the precautions against cholera adopted at the General Post-office, in London, Eng., says "The men employed in sorting letters and newspapers suffer much from thirst, especially in hot weather, and, consequently, drink much water while engaged in their duties. Although the post-office is supplied with excellent water, much diarrhœa was, nevertheless, the result of this practice. To remedy this, the officers, clerks, and men of all classes have of late been supplied from the Medical Department with a

most agreeable drink, which not only assuages the thirst, but has, moreover, strong antiseptic and anti-diarrhœa properties. It is called orangeade, and is thus composed: Take of dilute sulphuric acid, concentrated infusion of orange-peel, each twelve drachms; syrup of orange-peel, five fluid ounces. This quantity is added to two imperial gallons of water. A large wine-glassful is taken for a draught, mixed with more or less water, according to taste. The officers drink this with pleasure. It is being consumed in large quantities daily, and I am convinced that it will be the means of warding off a great deal of sickness."—*Exchange.*

*Milk an Antidote to Poisoning by Nitrate of Silver.*—Mr. Ernest Hart, in a recent number of the "British Medical Journal," relates that while house-surgeon at St. Mark's Hospital, a piece of nitrate of silver, with which he was painting the fauces of a child, broke, and the larger part of the caustic-stick was swallowed. He produced immediate vomiting by forcing his fingers on to the gullet, and having obtained a large supply of milk, pumped several pints into the child's stomach and out again. The child had dysenteric symptoms during the next three days and occasional vomiting, but was kept on milk diet, and recovered. Milk acts as an antidote to nitrate of silver in virtue of its large proportion of suspended albumen. Mr. Hart uses it in lieu of salt and water for neutralizing the excessive effects of even the mitigated caustic when employing it locally on the mucous membrane of the eyelids.—*Exchange.*

*To Keep Milk Sweet.*—A teaspoonful of fine salt or horse-radish in a pan of milk will keep it sweet for several days. Milk can be kept a year or more as sweet as when taken from the cow by the following method: Procure bottles, which must be perfectly clean, sweet, and dry; draw the milk from the cow into the bottles, and as they are filled, immediately cork, with pack-thread or wire. Then spread a little straw in the bottom of a boiler, on which place the bottles, with straw between them, until the boiler contains a sufficient quantity. Fill

it up with cold water, and as soon as it begins to boil, draw the fire and let the whole gradually cool. When quite cold, take out the bottles and pack them in saw-dust in hampers, and stow them away in the coolest part of the house.—*Southern Farmer.*

*Elixir of Chloroform.*—The following elixir of chloroform is recommended by the Pharmaceutical Association at Washington:

℞.—Chloroform, Tinct. Opii., Tinct. Camph., Sp. Ammon. Ar., aa. ℥ iss.;
Oil of Cinnamon, *m* xx.;
Brandy, ℥ ij. M.

*Dose:* Half a fluid drachm, more or less.

*Cold Cream.*—J. B. Moore, Philadelphia (the Pharmacist), recommends the following recipe as very superior:

Take Oil of Sweet Almond, 10½ fluid ounces;
Spermaceti, 3½ troy ounces;
White Wax, 10 drachms;
Otto of Rose, 6 to 10 drops.

Melt together by means of a water-bath, the oil, spermaceti, and wax, and strain through muslin, if necessary; stir constantly until it begins to thicken; then beat it well, and when it has become quite cool, add the otto of rose, and continue the beating till the oil is thoroughly incorporated, and the ointment is of snowy whiteness.

*Domestic and Harmless Hair-Dye.*—Scalded black tea, two ounces, in one gallon of boiling water; strain, and add three ounces of glycerine; tincture of Spanish flies half an ounce; and bay rum, one quart; digest the mixture for two or three days, and perfume with essence of rose or bergamot, or any other favorite essence to suit the taste.—*Med. and Surg. Reporter.*

*Blistering Paper.*—White wax, 8 ounces; sweet oil, 4 ounces; spermaceti, 3 ounces; turpentine and powdered cantharides, of each 1 ounce; boil for two hours, with constant stirring, in 10 ounces of water; strain through flannel, and while hot spread it on paper.—*Journal of Applied Chemistry.*

*Chloral as an Antiseptic.*—Mr. Stodart, of Bristol, has recently examined the stomach, lung, heart, kidney, and spleen of a patient who died from an overdose of chloral hydrate. "The first thing," he says, "that struck me, was the very extraordinary way in which the several portions were preserved. Even now, although more than a week has elapsed since death, yet not the slightest sign of decomposition has taken place, nor any unpleasant odor. This doubtless is the effect of chloroform in the tissues."—*Med. Press and Circ.*

*A Brilliant Stucco Whitewash.*—Take clean lumps of well-burnt lime, slack in hot water in a small tub, and cover it to keep in the steam. It should then be passed through a fine seive in a fluid form to obtain the flour of lime. Add a quarter of a pound of whitening or burnt alum, two pounds of sugar, three pints of rice flour made into a thin and well-boiled paste, and one pound of glue dissolved over a slow fire. It is said to be more brilliant than plaster of Paris, and will last fifty years. It should be put on warm with a paint-brush.—*Exchange.*

*Hypodermic Injection of Calomel.*—The "Revista Clinica di Bologna" relates eight cases of syphilis affecting the eyes, in which Dr. Soresina injected calomel suspended in glycerine. Six out of the eight cases were cured, and the other two somewhat improved. The successful cases included iritis, keratitis, retinitis, and paralysis of the third pair. The case in which the least effect was produced was thought to be due to atrophy of the optic nerve.—*Exchange.*

*Chloral Hydrate and Cod-Liver Oil.*—Ten grammes crystalized pure chloral hydrate dissolved by digestion in a sand-bath in 190 grammes cod-liver oil renders the latter more palatable. Used by consumptives, the preparation diminishes the night-sweats, produces sound sleep, and improves the appetite. The dose is six tablespoonsful daily.—*Pharm Zeit.*

*Wash for Cleansing Silver and Britania Ware.*—Take one pound of common hard soap, three tablespoonsfuls of spirits of turpentine, and half a tumbler of water. Allow the soap to

dissolve; then boil ten minutes, and before it cools add six tablespoonsfuls of hartshorn. Make a suds of this preparation, and wash the silver with it.—*Exchange.*

## MISCELLANEOUS.

**"Non omnes eadem mirantur ament que."**

*Intra-Uterine Medication.*—Prof. E. R. Peaslee has written a very systematic and somewhat lengthy paper on this subject, which we read in the "New York Medical Journal."

He divides the subject into endometrical injection and ingestion.

As is well known, the injection of simple water into the uterus may cause very appalling symptoms; pain, faintness, and collapse. This effect is brought about by the coldness of the fluid sometimes used, which of itself may cause painful contractions; by the sudden and forcible distension of the uterus; from a certain hyperæsthesia of the mucous membrane of the uterine cavity; and the fluid, it is said, may pass through the fallopian tubes into the peritoneal cavity, causing peritonitis. It has furthermore been said, that at times both air and water are injected, and enter open uterine vessels.

All bad effects from injections may be guarded against by adopting these precautions:

1. Let the water be at blood-heat or a little less.

2. Introduce it slowly and carefully, so as not to disturb the uterine cavity. Only ten or fifteen drops are needed to fill this in a virgin, and twenty-five to forty in one who has borne children.

3. Be sure to provide for a return of the overplus of water by the side of the instrument. This implies a previous dilatation of the cervical canal to a diameter greater than the tube of the syringe.

4. Abstain from the use of all injections if, on introduction of the sound into the uterine cavity, there is found to be tenderness near the fundus, for, in such a condition, even the contact of warm water will often cause intense agony. If there is no special sensibility of the endometrium, injections, with the precautions enumerated, may be regarded as safe.

Ingestion, or the carrying of a medicinal agent directly to the seat of disease, as paint is applied over the surface to be painted, as usually practised, has no advantages over injections. By use of proper means it may be made more efficacious than injections, and almost, if not perfectly, safe when applied in the proper conditions.

It is well known, that while simple water or solutions, forced into the uterus, may cause severe symptoms, very strong and stimulating ointment will not. The reason of this is that the latter does not distend the organ; if enough were used for this purpose the bad symptoms would result. It is usually applied on cotton, and only touches the diseased surface; if only fifteen or twenty drops of water were ever used, there would never be any injury done.

Ingesta seem then not to be open to the same objections as the other method. "I advocate this method in all cases in which it is appropriate in preference to injections, and especially when strong applications are to be made."

Of solid ingesta, the nitrate of silver has been used. It has proved an unsafe remedy in some instances; it has done much damage at times, and doubtless has no advantage over milder applications.

The writer inclines not soon again to use it.

The ointments have, as applications to the endometrium, no advantage over fluids, and may be entirely displaced in practice by the latter form of medication.

The fluid ingesta are of most importance; they are the same in substance as the injecta.

Endometrical applications are appropriate in metrorrhœa (uterine catarrh) and metrorrhagia. Of course, if either of

these is due to displacement of the uterus, or to the presence of tumors, the cause should be first removed if possible.

In metrorrhœa, before applying the medicine, the membrane should be thoroughly cleansed of all secretion. This may be done by injection, but ingestion is quite as effectual, and far more safe.

Ingestion of the medicament is preferable to injection; is preferable for the same reason.

In metrorrhagia, the blood may properly be removed by injection, and the styptic application to the diseased surface be made by ingestion. Injection in these cases, if properly made, is a perfectly safe procedure.

Endometrical ingestion is required in but few of the cases the gynæcologist has to treat, while injection should far more seldom be resorted to, and never unless preliminary to ingestion of curative agents, in cases where there is no other way to remove blood or secretion, or in cases of metrorrhagia, where styptics are required.

For cleansing the endometrium, a solution of salt is most valuable, and if there is no special sensitiveness, a very little soap may be added.

For medicaments, the tincture of iodine is most valuable in metrorrhœa, being used at first ℥i. to ℥i. of water, then ℥ii. to ℥i., and so on up to the full strength if needed.

The sulphate of zinc may be used, grs. v. to ℥i. of water at first, and the nitrate of silver, grs. v. to ℥i. to the ℥i. of water; the tannic acid from ℈i. to ℥i. to ℥i. of glycerine, and chloride of zinc, ℥ss. to ℥i. of glycerine.

If chromic acid is used, it should be with great caution, and not over one part to ten of water used at first.

In metrorrhagia, the persulphate or perchloride of iron, bears the palm.

To dilate the cervical canal preparatory to injection or ingestion, the sponge-tent is the proper method if the cervix is firm and indurated. If the cervix is, however, lax and easy of dilatation, Prof. P. has found very satisfactory a set of steel dilators of his own devising.—*The Chicago Medical Examiner.*

*Cause of the Occurrence of Labor at the Close of the Ninth Month of Utero-Gestation.*—Professor Alexander R. Simpson, in his introductory lecture ("Edinburgh Medical Journal," December, 1870), gives the following explanation of this: "Since the true nature of the decidual membrane came to be fairly understood, it was natural to seek in the changes which it undergoes for an explanation of the cause of the occurrence of labor at the close of the ninth month of utero-gestation. The search has not been fruitless; for it has been found that in the natural course of development the decidual membrane at this period has undergone a degree of fatty degeneration which has brought it to the last stage of its existence, when it would either require to be melted down and absorbed or be thrown off as a foreign substance. The same change occurs in it at an earlier date, if through some disease, an end be put to the life of the fœtus, and in such a case expulsion of the dead child does not take place until the time has been given for the degeneration to occur in the decidua, which leads to its being loosened from the uterine parietes and reduced to the condition of a foreign body. The observation of this phenomenon has led by a beautiful induction to the employment of the simplest, safest, and surest means of bringing on labor by imitating the process of nature and producing an artificial separation of the membrane from the interior of the uterus in those cases where, to save the life of the child and to lessen the mother's risk, it is found needful to induce the labor prematurely.—*Med. News and Library.*

*Permanganate of Potassa.*—Professor B. H. Rand tells us, in the "Medical Times," that we are constantly laboring under a delusion when we use this drug. Next to chromic or chlorochromic acid, it is the most active oxydizing agent known; in contact with organic matters, it is decomposed and becomes black oxyde of manganese and caustic potassa, oxygen being thrown off. When it is administered internally, the dose is not usually over half a grain, and this is decomposed by two and a half grains of organic matter. Then, considering the organic

contents of the stomach, it must be impossible for any of the permanganate to ever enter the circulation, there to give up its oxygen. The caustic potassa and black oxyde of manganese may do the patients good, but this is less probable than is supposed to be the case.

In surgical dressing it should not be applied to the bandages or by a sponge, as it is at once decomposed by the organic matter of these materials, and the effect in disinfecting the wound, an office which it performs most admirably, is not secured.

The great facility with which organic matter decomposes this salt is shown by its change in impure water, a solution so weak that only a faint pink tinge is perceived, losing its color on addition to water containing the slightest organic impurity.—*Exchange.*

*Speaking and Singing without a Tongue.*—In the transactions of the Philosophical Society, published between 1742 and 1744, there is an account of Margaret Cutter, who, when four years old, lost her entire tongue from a cancerous affection; but who, nevertheless, afterward retained the power of taste, swallowing, and speech, without any imperfection whatever. She not only spoke as fluently and with as much correctness as other people, but also sang to admiration, articulating with distinction all her words while singing. What is not less singular, she could form no idea of the use of a tongue in other persons. This remarkable case was brought before the Royal Society, under certificates of attestation from the minister of the parish, a medical practitioner, and another respectable citizen, well known in Suffolk, where she resided. On account of the extraordinary character of the case, the Society requested an additional report upon the subject, and from another set of witnesses named by the Society for the purpose, and for whom they drew up the necessary questions and marked out the proper course of examination. The second report coincided with the first in all particulars, and shortly afterward the young woman was brought to London, where she confirmed the account by personally appearing, and speaking and singing in the presence of the

members of the Royal Society and many other persons.—*The College Courant.*

*The Fungoid Theory of Cholera.*—Mr. T. R. Lewis, M. B., who was specially appointed to investigate the theories of Hallier and Petenkofer with regard to cholera, announces after long and careful examination, that—

1. No "cysts" exist in choleraic discharges which are not found under other conditions. 2. Cysts or "sporangia" of fungi are but very rarely found under any circumstances in alvine discharges. 3. No special fungus has been developed in cholera stools, the fungus described by Hallier being certainly not confined to such stools. 4. The still and active conditions of the observed animalculæ are not peculiar to this disease, but may be developed in nitrogenous material even outside the body. 5. The flakes and corpuscles in rice-water stools do not consist of epithelium, nor of its *débris*; but their formation appears to depend upon the effusion of blood-plasma, and the "peculiar bodies" Parkes found therewith correspond very closely in their microscopic and chemical characters, as well as in their manifestations of vitality, to the corpuscles which are known to form in such fluid; these are generally, to a greater or less degree, associated with blood-cells, even when the presence of such is not suspected, especially as the disease tends toward a fatal termination, when the latter have been seen to replace the former altogether. 6. No sufficient evidence exists for considering that vibriones and such like organisms prevail to a greater extent in the discharges from persons affected with cholera than in the discharges from other persons, diseased or healthy; but that the vibriones, bacteria, and monads (micrococcus) may not be *peculiar in their nature*, for these *do* vary, and may not be the product of a peculiar combination of circumstances, and able to give origin to peculiar phenomena in a predisposed person, is "not proven."—*Medical Gazette.*

*Flexion as a Means of Arresting Hæmorrhage.*—Dr. Adelman reports six cases in which traumatic hæmorrhage was per-

manently arrested after forcible flexion of the injured limb. The radial artery had been wounded in one case, the ulnar in two cases, and the palmar arch in one. One patient had severe bleeding from a wound near the elbow-joint, and the sixth case was one of gunshot wound of the right foot, followed at the end of eight days by severe arterial hæmorrhage. In all instances there was complete recovery after the employment of forcible flexion.

The following conclusions are laid down by the author:

1. Forcible flexion is a sure and ready method of hæmostasis in cases of wounds of the limbs.

2. It should always be tried before having recourse to caustics or to a bloody operation.

3. It may be tried after deligation of an artery has failed.

4. This method is to be especially recommended in military surgery.

5. It is desirable that the knowledge of this hæmostatic method should be vulgarized, so that the patient may be able to apply it whilst awaiting the coming of the surgeon.—*Medical Gazette.*

*Tuberculosis and Cancer.*—The correlation of these diseases has been for some time the object of anxious thought on the part of medical men. Facts have so distinctly obtruded themselves on the attention of observers that the mere collection of cases will go far to establish a relationship between tuberculosis and cancer. Among the most intelligent physicians who have clinically studied the subject, is Dr. Burdell, of Vierzon, in France. On the 17th of May last he read a paper before the Academy of Medicine, of Paris, in which it is stated that the diseases have been observed in more than one hundred families, both by the author and his father, to whose practice he has succeeded. It was found that parents affected with cancer had children who presented the tubercular diathesis. Dr. Burdell's memoir is remarkable, not only for the care with which the statistics were collected, but also for the sober manner in which theorizing is attempted. The facts speak so forcibly that the

Profession cannot fail to be struck by them. It would be well if one of our Societies would, next winter, appoint a committee to receive reports from medical men all over the country, respecting their experience on this important subject.—*Lancet.*

*Ossific Deposit in the Eyeball.*—Mr. Spencer Watson exhibited before the Pathological Society of London two specimens of ossific deposit in the eyeball. One occurred in the eye of a man aged thirty, whose eyeball had been destroyed long before, but had not been removed. Sympathetic ophthalmia made its appearance, and the diseased eyeball was then taken away; there was a bony deposit in the choroid; the lens were calcareous, and there was a deposit in the cornea. In the second, removed for the same cause, there was a slight deposit in the choroid around the entrance of the optic nerve. Dr. Careton, of Norwich, Conn., reports "Proceedings of American Medical Association for 1870," the case of a man who, for six years, had suffered from an obscure affection of the right eye, with loss of sight. On account of sympathetic trouble in the other organ the right eye was removed, and there was found between the choroid and retina a large, irregular, cup-shaped, formation of bone, in which there was an opening hardly large enough for the passage of the optic nerve. The capsule of the lens was also ossified.—*Medical Times and Gazette.*

*Action of Mercury on the Liver.*—In the "Edinburgh Medical Journal" for April, Dr. T. R. Frazer presents the ablest and most exhaustive paper on the action of mercury on the liver that we have ever seen. He takes up and discusses *seriatim* the various doctrines in regard to the influence of mercury on the liver—viz., "1. Mercury simply increases the flow of bile into the intestines. 2. It causes an increased formation of the bile by removing abnormal conditions that interfere with the secreting function of the liver. 3. It causes an increased formation of bile by an indirect action on the liver. 4. It causes an increased formation of bile by a direct and primary action on the liver. 5. Mercury has no cholagogue action whatever." After reviewing these propositions, he concludes that we are en-

titled to maintain the *first* as true. The second, third, and fourth propositions may be regarded as elaborations of the first, advanced to explain the obvious effects on which it is founded. But in the present state of our knowledge of pathology and physiology, it is impossible to prove that any one of these three is true. The fifth proposition maintained by Thudicum, Scott, and Bennett, has not been proved by them. In their experiments various disturbing agencies were present. Lesion of nerves, absorption of bile unmodified by digestion, the presence of inflammation and suppuration in the immediate vicinity of the liver, and imperfect digestion were all present, and must have exerted a modifying influence. The most important of these was the disturbance of digestion caused by interrupting the flow of the bile into the intestines. This alone would be sufficient to render inconclusive the experiments of these gentlemen.—*Michigan Medical Journal.*

*Chemical Food.*—At a recent meeting of the Académie des Sciences ("Chemical News," September 30th, 1870, from the "Comptes Rendus," September 12th, 1870), M. Rabuteau brought to notice a form of food on which, as he has proved by actual experience, a man may live for months, retaining his health and strength, and without other food. It is in the form of a dry powder, and consists of—powdered cocoa, 1000 grammes; sugar, 500 grammes; infusion of tea, 200 grammes; the two infusions having been made as strong as possible, and before incorporation with the other ingredients, having been evaporated to dryness. When completed, the weight will be 1600 grammes. Of this 150 grammes are to be taken daily, mixed with boiling water, and in the opinion of the author, it will be found as agreeable as it is life-supporting.

*Cod-Liver Oil—Hospitalism—Use of the Thermometer.*—It may not be generally known that cod-liver oil was first brought into notice and administered by Dr. Percival, of Manchester, at the close of the last century, in the hospital of which town nearly a hogshead was annually consumed. It was given by

the foregoing physician in chronic rheumatism, in sciatica of long standing, and in cases of premature decrepitude originating from immoderate labor, repeated strains, or exposure to continual dampness and cold. It is also of interest to remark that the same physician anticipated and drew attention to the evils of hospitalism, based on statistical information of the relative mortality in the Hotel Dieu, St. Thomas's and St. Bartholomew's Hospitals, the Northampton and Manchester Infirmaries, and in private practice. Thus, of all patients admitted into the Hotel Dieu, he found that two out of every nine died; into St. Thomas's and St. Bartholomew's one out of thirteen; into the Northampton Infirmary, one out of nineteen; and into the Manchester Infirmary, one out of twenty-two, which he ascribed to the fact of the latter being built in an airy situation, and well ventilated.

The employment of the thermometer in disease must date further back than the time of Wunderlich, as it was resorted to by Dr. Fordyce, who directed it to be placed under the tongue to register the temperature, as appears in his scheme for improving the evidence of medicine.—W. Boyd Mushet, M. B., M. R. C. P.—*Brit. Med. Journal.*

*A surgeon* in the United States Army sent to the "Boston Medical and Surgical Journal" a burlesque article in praise of Spaulding's prepared glue ("ichthyocollæ preparatæ Spaldingii") as being useful in cases of falling of the hair, etc. It received a serious review from the "London Medical Press and Circular" for May 4, 1870, which thinks that there are "far too many of such preparations in the American practice of medicine."—*Medical Times.*

*Dr. Guyot* gives from 30 to 60 grains of phosphate of lime in profuse perspiration, and especially in night sweats incident upon phthisis pulmonalis. He mixes the phosphate with loaf sugar, and requires the patient to take a pinch of the powder frequently through the day.—*Revue Therapeutique.*

*Brandreth's Pills*, which, according to the analyses of Dr.

Wittstein, consist of resin of podophyllin, poke-berry juice, saffron, cloves, and oil of peppermint, are said to have netted the proprietor nearly $2,000,000; a fact which is announced by an exchange under the appropriate heading of "Pillage." Among other nostrums of which the formulæ are given in Wittstein's *Taschenbuch der Geheimmittellehre* are the following, largely advertised in America, which we find quoted in the "American Journal of Pharmacy:

*Holloway's Pills* are composed of aloe, myrrh, and saffron.

*Morrison's Pills*, two and a half grains each, consist of aloe, cream of tartar and colocynth; another kind contains the same ingredients, besides gamboge.

*Radway's Ready Relief*, according to Peckolt, is an ethereal tincture of capsicum, with alcohol and camphor.

*Radway's Renovating Resolvent* is a vinous tincture of ginger and cardamom sweetened with sugar. (Hager and Jacobsen).

*A Painless Knife.*—Dr. W. B. Richardson, of England, has invented what he calls a painless knife, which has just been exhibited before the British Medical Association, in session at Leeds. It consists of a keen, circular plate, so connected with watchwork in the handle that it can be made to revolve with very great rapidity. It is found that when a speed of twenty-five complete revolutions in a second has been obtained, the edge of the knife may be applied to the animal body, and it will divide the soft parts without pain or even consciousness. Dr. Richardson was able to cut the ears of a rabbit into strips while the creature was contentedly munching green stuff, in entire ignorance of the way in which it was being injured.—*Exchange.*

*Means of Distinguishing Real from Apparent Death.*—Dr. Laborde communicated to the French Academy of Medicine (July 26, 1870), an interesting memoir on some of the physical phenomena of life, and on their application to distinguishing real from apparent death. He states that if a polished steel needle be inserted to a sufficient depth into the muscles of an

apparently dead subject, and allowed to remain in generally a short time, it loses its polish and becomes oxidized; whilst this oxidation does not occur when the needle is introduced into a dead subject, if the needle be allowed to remain even as long as an hour. This absence of oxidation, with concomitant phenomena, is according to Dr. Laborde a constant sign of real death. *L' Union Medicale.*

*Supernumerary Mammary Glands.*—A case is recorded in the "Revue Photographique des Hopitaux" of a primiparous woman having two supernumerary breasts, about the size of a small orange—one situated in each axillary region. At the menstrual periods these glands were painful. After confinement the colostrum was found to be in small quantity and deficient in quality, as was likewise the lacteal secretion, which was established simultaneously with that of the normal organs.—*Medical Times.*

*Uses of Oil of Sassafras.*—Dr. Thompson, of Nashville, finds that a few drops of sassafras oil will entirely neutralize the narcotic effects of tobacco. When put upon cigars, the same effect is produced. It is also said that sassafras oil is a good remedy for the bite of a rattle-snake. How far this oil would act as an antidote to the alkaloids is not stated, but it ought to be tried. It has long been used to prevent the fermentation of mucilage and inks.—*Journal of Applied Chemistry.*

*Ligation of the Common Iliac.*—Dr. Wm. Gibson, of Philadelphia, first ligated this artery in 1812, in a case of gunshot wound. The patient died in thirteen days after ligation. Dr. Valentine Mott, in 1827, tied it for the first time for aneurism. The man was well in less than two months.

Dr. S. D. Gross states that it has been secured altogether about forty times.—*Cincinnati Lancet and Observer.*

*A woman* named Cooper, housekeeper to Mr. W. Boyce, at Newmarket, was sitting near a table on which were some poisoned papers for the purpose of killing flies. A fly was seen to

go to one of these papers, and then to alight on the woman's nose, which was slightly scratched. The wound speedily became inflamed, in a short time her whole system became affected, and in about twenty-four hours she died.—*Lancet.*

*The Earth-Closet System.*—We had occasion, says the "Journal of Applied Chemistry," during the summer, to subject the earth-closet system to a thorough test, and are so fully convinced of its practicability and efficacy that we deem it our duty to publish the results of our experiments. We prepared the earth by passing it through a seive such as masons use, and allowing it to dry in the sun. A few minutes sufficed to get ready enough to last a week, and, as we used the same earth over again five or six times, the labor and trouble of this part of the operation was very slight. We had a self-acting seat, and a hopper large enough to hold dry earth sufficient for a week's supply for a family of five persons. The tank under the seat was made of wood, on runners, so that it could easily be run out into a wheel-barrow, ready for dumping. A more convenient method would have been to put this on wheels, ready to remove to the shelter for drying. When the tank was full it was emptied upon a floor under an open shed, and in a day or two the earth was usually sufficiently dry to be employed again; after the earth had been used five times it had the odor of guano, but was not in the least offensive. There was not the least smell observable in the closet, so that we had it constructed under our piazza, and could have used our commode in any apartment of the house without the slightest inconvenience.

So far as disagreeable smell is concerned, we did not fully appreciate the great advantages of the earth system over the water-closets until we came to town; and we should be glad to be able to use earth in the city, on the score of its freedom from the unhealthy smell that attends the emyloyment of water, if it could be obtained from dealers, and could be called for by the drivers of ash-carts. We have no doubt that, in the course of time, dry earth will be substituted for water in a majority of our best city houses. The open-privy system of the country is

the occasion of much sickness, and is such an unmitigated nuisance that it ought to be prohibited by law. It poisons the air, fills the well water with organic matter, and produces fevers and cholera. There is really no valid excuse for not introducing the earth-closet system in the country, and we are of the opinion that nothing but ignorance stands in the way of its universal adoption.—*Buffalo Medical and Surgical Journal*, May, 1871.

*Quassia for Surgical Dressings.*—"Flies cannot bear the smell of the wood, maggots are therefore entirely avoided," says Mr. C. C. Murchison, in the "Lancet." The use of an infusion of quassia as a dressing for open wounds and ulcers in hot climates and during the prevalence of hot weather, he recommends, and states that in the United States army, after one of the James River engagements, 500 wounded men under the care of a friend of his were treated in the above manner.—*The Doctor.*

*Dr. James Rodman*, of the Western Lunatic Asylum of Kentucky, reports a case in which 270 grains of chloral were given to a patient in less than two hours. He slept profoundly for eighteen hours, and then recovered complete consciousness. No bad results followed. During this time the patient was, by considerable effort, sufficiently aroused to swallow a small quantity of water.—*American Practitioner.*

## MEDICAL NEWS.

"Nulla dies sine linea."

A Surface-Thermometer. By E. Seguin, M. D., New York. Read before the New York Medical Library and Journal Association.

When thermometry was first introduced into our hospital and private practice, I published in the "New York Medical

Record," in its number of January 1, 1867, an exhaustive article on the subject, accompanied with large diagrams, in which will be found the following prediction: "The *fever-thermometer* answers very well to measure the temperature of the body taken at completely sheltered places; but we must acknowledge that it is not fitted to measure the abnormal temperature of local inflammation upon open surfaces. It would often be desirable that an excess of local heat might be compared at its different stages with the normal heat of surrounding healthy parts; and we do not doubt that some mechanical genius will yet devise a kind of thermometer whose broad, yielding bulb shall adapt itself to any surface of the body, at the same time that its superstructure shall be isolated from atmospheric influence. *What mankind needs man finds.*"

This appeal, exactly four years old now, seems to have been answered by the writer himself, who has just presented the wished-for instrument to the New York Medical Journal Association as the result of his study and of the ingenuity of Mr. Stohlman, the instrument manufacturer, who tenders so willingly his mechanical skill to the service of medical and surgical inventors.

The question at issue may be thus summed up.

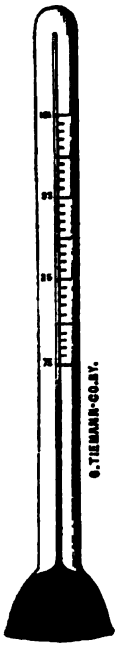
A *fever-thermometer* for general thermometry; a *surface-thermometer* for localized thermometry.

This double proposition needs only a short commentary.

The *fever-thermometer*, though of recent origin, has already rendered many services. But its shape, well adapted to cavities, does not suit surfaces. How could it be rendered serviceable upon surfaces by some simple and ready modification, remained a desideratum. Hence the necessity arose of contriving a *surface-thermometer*, whose sensitiveness to caloric concentrated at the bottom of the mercury reservoir could indicate the exact temperature of any given surface.

The principle of the *fever-thermometer* is, that its standard of health is invariably, according to Wunderlich, 98 6-10ths Fahr., from which point it starts up to mark fever, and down to mark devitalization.

On the contrary, the *surface-thermometer*, acting on surfaces whose temperature depends on a large range of atmospheric and physiologic or pathologic combinations, will mark only the difference of temperature between a well and a sick side or part without a prefixed standard. Hence the necessity, when using the latter instrument, to apply it alternately to the part known or suspected to be diseased, and to an opposite or neighboring part whose health is unquestionable; so that the difference of temperature found expresses in figures the intensity of the disease—that is the standard of the *surface-thermometer*.




Its structure is sufficiently described by the accompanying drawing, which is full-sized, in all particulars but one—that is the rigidity or flexibility of the mercury reservoir.

Its *modus operandi* consists in warming it in the hand up to 75° Fahr., and placing it at right angles alternately for a few minutes on the two antithetical points selected for the observation. It is useless to remark that, if the sufferer from a local affection is also the subject of general inflammation, he falls under the index of the *fever-thermometer*.

To mention a few cases where the *surface-thermometer* can be used, besides its application in experiments of physiology and organic chemistry.

A.—To measure the power of calorification of localized electricity, of the Mayor's hammer, caloric mixtures, etc.

B.—In the obscure beginnings of hemiplegia and paraplegia it shows a larger evolution of heat on the threatened parts than on the sound ones, and in confirmed paralysis the reverse obtains, the temperature of the affected parts being shown lower than that of those remaining sound.

C.—In articular rheumatism, sciatica, facial neuralgia, etc., the *surface-thermometer* will show rises and falls of local temperature, which may throw a new light on the origin of neuroses.

D.—In local diseases of children, idiots, insanes, and of other persons who cannot indicate the seat of their affection, the *surface thermometer* may point it out.

E.—With a slight modification in the shape of the bulb, as already suggested by Dr. H. Shiff, or in its present form, not objected to by Dr. Knapp, it will mark the changeable differences of temperature between a sick and a well eye, and may warn of the approach of sympathetic ophthalmia and other accidents. Other specialists will likely find its application to their favorite pursuits.

F.—In the formative stage of deep-seated abscesses their centre will often betray itself by a higher temperature. In chronic and cold abscesses it will not be so, and may be the reverse.

G.—In deep-seated surgical lesions the new instrument will often reveal the very centre of disorganization, or the extent of effusions, of which even a skillful hand may remain in doubt. When, according to the energetic expression of John Hilton:* "A surgeon finds himself between two alternatives, plunge in the knife," or "wait till the abscess comes nearer to the surface; but the patient may die in the meanwhile," then the *surface-thermometer* will rise higher at the centre of a tumor, even if there is abscess, or fluctuating like the sphygmometer of Jules Herrisson, if there is aneurism; that may prove to be one advantage of the flexible bulb.

H.—The proposed instrument will be in frequent requisition to ascertain the rise or fall of temperature in a region lately submitted to a grave operation, or hidden from view by an immovable apparatus.

I.—The *surface-thermometer* may be equally sensitive to the local evolution of pathological heat in pneumonia, pleurisy, peritonitis, typhoid fever, etc., as in the slower affections, chronic meningitis, pulmonary phthisis, tabes mesenterica, chronic metritis, and ovaritis, etc., etc.

Let us observe, moreover, that the mode of investigation instituted by the *surface-thermometer* is kind, and never presents the very grave dangers feared from deep palpitations, per-

* "Influence of Mechanical and Physiological Rest in the Treatment of Accidental and Surgical Diseases."

cussion, succussion, and other unmercifully repeated manipulations.

In any case, the *surface-thermometer* will have also upon the hand, even the hand gifted with the *tactus eruditus*, the advantage of being early brought to a mean, known, and impartial temperature; whereas the hand comes to the work of diagnosis with a variable warmth of its own, variously estimated, and variously interfering with the perception of the temperature of the parts under observation.

It is not necessary to dwell any longer upon the advantages of this new and desirable instrument of *positive diagnosis*. It is offered to the Profession to be tried; if found imperfect, somebody will perfect it. But in its present shape, or with some happy modification, sooner or later it will be the mate and complement of the *fever-thermometer* in the pocket-case of every industrious practitioner.

*Thomas Hawkes Tanner*, M. D., F. L. S., M. R. C. P., died in Brighton, July 7th, at the early age of forty-six. He began practice in London in 1847, and since then has held several responsible appointments, and enjoyed for many years past a very extensive practice. His "Manual of the Practice of Medicine," originally published in 1854, has gained in popularity with each successive edition, and from a mere pocket-manual has grown to a complete work in two large volumes. He was the author also of "Signs and Diseases of Pregnancy," a "Practical Treatise on the Diseases of Infancy and Childhood," "Clinical Medicine," an "Index of Diseases," "Memoranda on Poisons," and several smaller works and papers on various subjects. The leading characteristic of his life was indomitable industry, which enabled him to accomplish a vast amount of work, though at the sacrifice of his own health. He had been suffering for several years from renal disease consequent on an attack of scarlet fever in 1854, and his death was caused by uræmia. For two months before his death he had been obliged to relinquish his professional duties.—*New York Medical Journal.*

*Prize Essay on "Diseases of Children"—Open for Universal Competition.*—The President of the Medical Society of the County of New York, Dr. Abraham Jacobi, has placed in the hands of its Treasurer four hundred dollars ($400), to be awarded for the best essay on "A History of the Diseases of Infancy and Childhood in the United States, and of their Pathology and Therapeutics." Competitors will send their essays in English, with motto attached, and the name and address of the writer, with the same motto, in a sealed envelope, to the present Secretary of the Society, Dr. Alfred E. M. Purdy, 123 East Thirty-eight street, New York, on or before January 1st, 1873.

The Committee are authorized by the Society to withhold the prize if the essays submitted should not merit it.

AUSTIN FLINT, M. D.,
ERNST KRACKOWIZER, M. D.,
EDWARD S. DUNSTER, M. D.,
} Committee.

*Commendable Conduct of French Physicians.*—When the great Cathedral of Notre Dame was fired by the Communists, the resident physicians and surgeons of the Hotel Dieu, adjoining, at the risk of their lives, and with the aid of some other persons, succeeded in extinguishing the flames. But for this the Hotel Dieu would have been burnt, with frightful loss of life to the helpless invalids within its walls.———*Count Wollowicz, M. D.*, whose labors in the field of hygiene conjointly with Professor Parkes have rendered his name familiar to our readers, died at Netley, Eng., the 20th of August.—*Med. Gaz.*——— The Paris Academy of Medicine has refused to strike off the names of their eminent German colleagues from the roll of members, though there was a command given that this should be done.———The secular press, and medical writers for the secular press, are endeavoring to create a sensation in regard to cholera; these last are advertising themselves. The public is being terrified with the fossil, obsolete, and foolish idea that the prevalence of this disease is due to local causes. The disease seems to be temporarily, if not definitely, checked in its westward march.———Cundurango has been consigned to an

untimely grave. The quacks have adopted it. Dr. Bliss had best give it a long and last farewell, unless he has gone over to the ranks of Charlatanism; for to praise it is Charlatanism.——Stimulating hypodermic injections of sulphuric ether have given curious and excellent results in the crisis and collapse of typhoid fever. This remedy, and occasionally a solution of ammonia hypodermically used, have rescued many from impending death.——*Local Anæsthesia.*—Dr. Spessa states in the "Bulletin des Sc. Med." (Italy) that he has succeeded in preventing pain during the slitting of a fistulous tract by injecting a solution of morphia into the tract before cutting. The same author had occasion to touch the vulvar vegetations of a girl with butter of antimony; the pain was very acute, but disappeared on the part being brushed over with a solution of morphia. A boy of fifteen, suffering from hip-joint disease, required an issue over and behind the great trochanter. An injection of morphine was first made over the region, and Vienna paste applied, which latter remained about eight minutes. The paste did not give any pain. Dr. Spessa states that he would be glad to hear that a fair trial has been given to this mode of using morphia. *Lancet.*

## EDITORIAL.

**"Nullius addictus jurare in verba magistri."—Hor.**

### EDITORIAL BREVITIES.

The medical and scientific world sustains a grievous loss in the untimely death of Thomas Hawkes Tanner, one of the most able, industrious, reliable, successful, and analytical writers known to medicine. The testimony of the best judges has been an almost uniform laudation of the man, the physician, and the author. A few puny attacks have been made by puny men upon him while undertaking reviews of his productions,

but the weapons used, like the Australian boomerang, have returned home to the source from which they sprang; unlike the boomerang, however, they have returned without doing the least injury to the object which had been selected as the target. Dr. Tanner could well afford to refrain from noticing these harmless though noisy little foes. He has gone to give an account of a well-spent life, without dignifying his detractors by even a single blow. A short notice of him appears elsewhere. ——— Dr. William A. Hammond ("Detroit Review of Medicine and Pharmacy") recommends *phosphorus* for wakefulness. Twelve grains of phosphorus are boiled in an ounce of almond oil and filtered. Half an ounce of this is mixed with an ounce of gum-arabic, and fifteen drops of some aromatic oil are added. Of this dose the mixture is fifteen drops—containing one-twenty-fourth of a grain of phosphorus. Three doses are given before bedtime, generally producing sleep on the second day, if not on the first. The dose may be increased one drop a day, until twenty drops are taken, or signs of gastric irritation supervene. He has employed for this purpose the bromide of potassium combined with *sumbul*. The dose of the fluid extract of sumbul (Neergard's) is from twenty drops to a drachm three times a day.———In a flying visit to the Institution for the education of weak-minded and idiotic children, at Frankfort Ky., all portions of the building were examined. It is in excellent condition, and reflects credit upon the indefatigable and enthusiastic superintendent, Dr. E. H. Black, of Kentucky. The Instution is well conducted in every respect. The cubic space allotted is insufficient for healthy respiration and sound hygiene. It is to be hoped that the Legislature will allow Dr. Black to correct this manifest defect, of which he is so well aware. Pre-pubertic menstruation is not an uncommon phenomenon among this class of patients, and simulated epilepsy has caused trouble, as well as surprise and amusement. These children receive careful attention, and are in efficient and excellent hands.———*Cases of Ovariotomy.*—Of the 100 cases of ovariotomy reported by Mr. Thomas Keith, of Edinburg, 81 recovered. In the first 50

the mortality was 22 per cent.; in the last 50 it was only 16. He remarks that the larger of those who died were poor, worn-out women. If there had been an earlier operation in some of them, he says, the mortality would undoubtedly have been much lower.—*New York Medical Record.*———*A Treble Amputation.*—Dr. Marten, of Horde, Germany, relates in the "Allg. Cent. Zeit.," of Berlin, (March 25, 1871), the case of a girl, aged ten years, who was run over by a railway train. The right hand, the left thigh, and the right knee, were completely crushed. The surgeon at once amputated the right forearm, the left and the right thigh, the patient being under the influence of chloroform. Very little blood was lost. In three months all was cicatrized, after some trouble with conical stumps, and a little slough from crushing. On the patient's sacrum a small tumor was found, which was no other than a *cured spina bifida.* A little bed sore had formed here, which, however, was soon closed. The child being in good health, was given an artificial arm. She usually managed to glide along the floor of the ward, and was just about to have casts taken for artificial lower extremities, when she unfortunately took the hæmorrhagic small-pox, and died within three days, about five months after the accident.——— *Spencer Wells on Anæsthetics.*—In a communication to the "Lancet," T. Spencer Wells states that he has employed chloromethyl, or bichloride of methylene, in about 180 cases of ovariotomy, and in more than 75 other severe operations. In some cases insensibility was maintained from forty-five minutes to an hour, or more, and yet he has never felt the least uneasiness during the administration of the anæsthetic. Subsequent vomiting has been found to be the exception, while with chloroform it has been the rule. He had employed chloral in 32 successive cases of ovariotomy, in private practice, without a single death. In some cases less than two drachms were used, and very rarely more than six. Mr. Wells has now performed ovariotomy in 417 cases.———A favorite method of treating itch in children on the continent is, by inunctions of balsam co-

paiba. It is an easy, harmless, painless, and radical means of cure. ———Dr. Tilt condemns division of the sphincter vaginæ for the cure of vaginismus. He uses forcible distention (for five minutes) with the thumbs, the patient being under the use of chloroform. ——The "Medical Record," in censuring surgeons for the contemptible method of using the daily Press for advertising themselves, uses the following satirical language: "Whatever may be said of the offenders in regard to their not being accessory to such acts of impropriety, it is a significant fact, that when threatened with expulsion from a Society, etc., unless some means are used to prevent further paragraphing, the notices do not appear. Perhaps from that time the ambitious individual ceases to make any more important discoveries or to perform any more skillful operations."

NOTE.—It is wonderful how easily this species of trickery and unfair dealing can be stopped. Those who could never induce "their friends" to refrain from noticing them in the morning papers, have only to be threatened with proper punishment, when (presto) their officious and imprudent friends become miracles of prudence and wonderful judgment; as docile as lambs; as amiable and manageable as "suckling doves." The newspapers are, indeed, as Hamlet said of the players, "the abstract and brief chroniclers of the times;" they chronicle the period when Charlatans can with impunity advertise themselves; and they chronicle also the period when these same Charlatans are afraid to do this or to have it done. These times, or periods, change, and there has been a great change recently. Just now the great surgeons of the Mississippi Valley are in a state of hibernation; to use a popular description, they are "keeping dark," and digesting the hard meal which ushered in (as usual) the period of hibernation. They have disappeared; like the Saurians, the Megatheriums, the Bos-Primo-genius, and other monsters of pre-historic life, they belong now to a past period. The student of medical geology may at some future time, if he delves deeply enough, exhume "the remains"; he may, like Hitchcock, standing over the pachydactalous footprints in the new red sandstone of the Connecticut Valley, muse over the wonderful palæoutology of a wonderful period; of a period wherein the footprints evince sudden transition from restless activity to the extinction of fossiliferous repose.

THE RICHMOND AND LOUISVILLE

# MEDICAL JOURNAL.

VOL. XII. NOVEMBER, 1871. No. 5.

## ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—THREE CASES OF OVARIOTOMY. By H. P. C. WILSON, M. D., Ex-President of the Baltimore Pathological Society, and Surgeon to the Union Protestant Infirmary in Diseases Peculiar to Women. Read before the Baltimore Pathological Society.

I present to the Society this evening, Mr. President, the report of three cases of ovariotomy which have recently been under my care. Two of the tumors, which are cystic, (one a single cyst, weighing with its contents forty-two pounds, the other a binilocular cyst, with a weight of twenty-six and a half pounds,) I herewith exhibit. The third specimen was shown to you some months ago. You will remember it as a case of cancer of both ovaries. The right ovary being a cystic cancer, so far advanced in degeneration as to prevent its preservation, and weighing from thirty-five to forty ounces without its fluid contents; the left ovary being scirrhus, and some four or five ounces in weight. Of the two single cysts, one grew from the right, and the other from the left ovary.

I do not report these cases as presenting anything of very remarkable interest, but to throw in my mite to the statistics of an operation which has so rapidly grown into favor within a recent period.

We may be justly proud of some of our countrymen for the strides which they have made in this department of surgery, and for their successful efforts in rescuing ovariotomy from the oblivion to which many most distinguished surgeons in this land (the land of its birth) would have consigned it.

McDowell, Atlee, Peaslee, Thomas, Emmet, Sims, and others in our country, are strong arms, that have done so much to elevate this operation to its present status, and enabled us to proudly hold up our heads among the nations when its history shall be fully written.

It is unallowable for us to say anything of our own city and its ovariotomists among the other cities of this land; our reported cases must speak for us. I propose to lay my cases before you as they occur from time to time.

CASE I.

Mrs. J. A., aged fifty-six, German, married, the mother of ten children, all living, had one miscarriage; robust and of good condition. Was called to see her April 29, 1869. Found her with an ovarian tumor, and suffering severely from great distention of the abdominal walls; the ovary tender, and constant tearing pains on the right side of abdomen. She had been unable to assume the recumbent position for many days, and the little sleep she obtained was while sitting in a chair.

I gave brisk purgatives; ordered twenty drops of chloroform at bedtime when she could not sleep, and advised the operation of ovariotomy, the sooner the better. The brisk purgatives and soporific greatly increased her comfort, so much so that she hesitated for some time about the operation, and especially as several medical gentlemen had told her that nothing could be done for her. The tumor was evidently cystic, but had never been tapped.

She gave the following history: Twelve months ago (April, 1868,) she felt perfectly well; had previously uninterrupted health. About that time noticed a small bump in the left iliac region; it increased slowly, but gave her no inconvenience for several months. About October it began to grow more rapidly.

From January, 1869, to the date of my seeing her, it has grown with great rapidity; has attained three-fourths of its size since January 1st. Early in this month, while returning from market with a basket on her arm, she stumped her toe, which gave the body a terrible wrench, and from that hour the tumor rapidly increased in size.

On May 18, 1869, having two days previously given a brisk purgative, and having given her half a grain of opium for two nights before, I proceeded to operate on a table, under chloroform, assisted by Drs. J. J. Chisolm, E. Lloyd Howard, Henry R. Noel, William T. Howard, Alexander Thom, of Virginia, and William B. Griffith, with other medical gentlemen present. I made an incision along the linea-alba, two inches long, half way between the umbilicus and pubis; I dissected very carefully through the abdominal walls till I entered the abdominal cavity and came upon the tumor. As is usual, there was a sudden gush of straw-colored serum from the peritoneal cavity.

I satisfied myself that I was in the abdominal cavity by passing my fingers in up to the umbilicus, and finding everything free at that point. Had it been otherwise I could not have passed it beyond that point. I then swept my finger as far as it would reach around the tumor; found the adhesions to the abdominal walls extensive, but easily broken. To accomplish the same end where my finger could not reach, I swept a large sound around the tumor, and thus broke up all adhesions, and ascertained there were none visceral.

The patient was then rolled over in the semi-prone position, and the tumor tapped with a large-size trocar and canula of half an inch in diameter. I tapped in this position to avoid the escape of any of the fluid into the abdominal cavity, and as an additional safeguard to such escape, when the sac was about half empty it was seized with strong forceps and drawn firmly against the abdominal incision.

The fluid that escaped from the cyst was the color of dark molasses, and about the same consistence. Up to this point I felt very sure I had to deal with a unilocular cyst, but when

this cyst was completely emptied and I attempted to draw it through the abdominal incision, I could not get it out. I then introduced my finger down to the pedicle to feel for some pelvic adhesions, and while sweeping it about very gently, there was a sudden gush of the same molasses-like-looking fluid from the abdominal cavity, and out came the sac in an apparently ruptured state, and along with it a considerable portion of the small intestine. For a moment we were at a loss to know where this fluid came from. We were satisfied that no fluid had escaped into the abdominal cavity in the act of tapping, and it was not until after the cyst was removed that we discovered the presence of a binilocular instead of a unilocular cyst, as at first supposed. This second cyst was about the size of an ordinary orange; it contained the same kind of fluid as the first, and the walls of it were so exceedingly thin that the gentle explorations of my finger ruptured it.

Wells's clamp was applied to the pedicle; the pedicle severed with scissors; the stump touched with undilute liquor ferri persulphatis; the intestine returned to the abdominal cavity; the patient rolled over on the abdomen again, that all fluid in the peritoneal cavity might escape; the abdominal cavity well sponged out and cleansed by small sponges on sponge-holders, and the wound closed by four interrupted iron-wire sutures—three above the pedicle, and one through and below it, so as to make the lower commissure of the incision hug the pedicle tightly.

A bat of raw cotton was then laid over the abdomen, a bandage of flannel applied firmly around the body, and the patient lifted into the bed before the effects of chloroform had disappeared.

She awoke cheerful and bright; entirely unconscious of anything that had been done. Pulse better after than before the operation; no nervous shock; said she felt as if she could eat a hearty dinner; no nausea from chloroform; no hæmorrhage during the operation.

A grain of opium was ordered at once, and to be repeated

every two, three, or four hours, as necessary to keep the patient semi-narcotized. Perfect quiet was enjoined, and all company excluded but her husband and nurse. The cyst and its fluid contents weighed twenty-six and a half pounds.

The operation, from the commencement till the patient was ready for bed, occupied twenty-five minutes, as reported by one of the gentlemen present. After she was arranged in bed, a self-retaining catheter, with a gutta-percha tube attached, was introduced, and left in the bladder. Beef tea and milk diet ordered.

This patient went on to do well. The opiates were continued for some days, more or less as necessary. Showed much activity about the third day, and was put on half an ounce of whiskey, with the beef tea, every three hours, which had a very happy effect. Her only unpleasant symptom was a bed-sore, which made its appearance on the third day after the operation. This gave great discomfort, and, in spite of all treatment, did not heal till after she was convalescent.

On the sixth day the self-retaining catheter was removed; on the tenth day the three superior sutures were removed; on the thirteenth day the clamp was removed, and the bowels were naturally evacuated; on the eighteenth day she was sitting up; on the thirty-first day was attending to her household duties, and had already walked out to see a neighbor. Is living now, and perfectly well.

CASE II.

Miss H. P., aged fifty-six, came to see me for the first time the latter part of November, 1869. She was alarmed on account of a flow of blood from the uterus, after the cessation of the menses for eight years previously. This monthly flow for several successive periods, together with a small lump in the right inguinal region, gave her great anxiety. Her health had been excellent during her whole life till three months before the visit to me, when she began to feel a good deal of general debility, but attributed it to the extreme heat of the season, and the fatigue of her school.

In September, 1869, she had a very ill relative, and was greatly broken down by constant nursing for some weeks, and it was then that she first began to have the uterine flow, and experience a slight swelling in the groin.

These symptoms increasing, she came to me in the early part of November. I found a good deal of fullness and fat about the abdominal walls, which rendered examination by bipalpation difficult. The hymen was perfect. She was unwilling to take chloroform, and was greatly agitated at a uterine examination; so that the difficulties of making an accurate diagnosis can only be appreciated by one making the attempt.

I recognized, however, a tumor in the right groin, disconnected with the uterus, apparently solid. The uterus was in position, and not unduly enlarged. Nothing was wrong about the cervix; there was a very slight uterine discharge of blood; no effusion into the abdominal cavity, and no anasarca; had a general cachectic look; very much as all patients from a highly malarious district.

I advised her to return home, watch the progress of the tumor, and return to me in the spring of 1870. Instead of that, she returned on January 13, 1870, enormously swollen from *general dropsy*, and greatly debilitated. She was sent to the Church-Home Infirmary. I watched her for several days, and so great was the dyspnœa that I was compelled to tap her on January 17th. I drew off between four and five gallons of clear straw-colored fluid, which revealed by proper tests about four-fifths of solid albumen in any given quantity. So great was the œdema of the lower extremities that the finger readily buried itself on pressure. The heart, liver, and lungs were found sound. Passed very little urine; no albumen in it, but heavily loaded with phosphates.

After the fluid from the abdominal cavity was drawn off the tumor in the right inguinal region was carefully examined. It was found to have increased much in size since my examination in November last. There seemed to be obscure fluctuation in it, but this was doubtful; more of the solid than fluctuating sensa-

tion on palpation and percussion. Line of dullness and clearness obscure. There was a general rotundity of the abdomen, flattened on the top when patient was in the recumbent position, instead of pointed or conical, as in cystic disease of the ovary. There was a peculiar doughy, boggy feel about the abdominal walls. The uterus was found in the right position, with a little tilt to the right side and in front. There was no evidence of any uterine attachment to the tumor. There was an obscure feeling of nodulated irregularity of surface on digital examination of right ovary per vaginam.

Taking together these symptoms, I diagnosed cancer of the right ovary. I so stated to her and her friends, and told them that an operation would in all probability be fatal. I examined her repeatedly for some days, and always came to the same conclusion.

Very soon the abdominal dropsy began to reäccumulate. She was much more comfortable and stronger after the tapping, until the fluid began to accumulate rapidly again, when the strength failed as the general dropsy increased. Her kidneys could not be induced to act more freely. Urine very scanty, and heavily loaded with phosphates.

On February 18th (one month and one day from last tapping) I was compelled to tap her again, on account of the great abdominal distention and difficulty of breathing. She was very feeble, and I doubted whether she would survive the tapping. She did, however, and we drew off four or five gallons of clear yellow fluid, and she rallied after it as before.

After this tapping a tumor of the size of a young child's head, well defined, semi-solid, semi-fluctuating, and very obscure in its nature, presented itself in the umbilical region as it had never done before, and in some points very much resembled an unemptied cyst of a composite multilocular ovarian tumor. Up to this moment I had never wavered in my first diagnosis. Although I felt that I could not have been mistaken, yet as signs now presented, there was room to doubt whether my early diagnosis was correct beyond question. I asked for a consulta-

tion, and especially as friends were growing restive under my refusals to operate.

My friend, Dr. J. J. Chisolm, was called to see her with me. He thought the case obscure, but good reasons to doubt the correctness of my first diagnosis. The patient was rapidly failing; was greatly debilitated; in all probability could not survive another tapping, and we both felt (as grave as the case was) that unless she could be possibly saved by an operation, she could live but a very little while. We determined, as giving her the only chance, to make an explorative incision into the abdominal cavity, and proceed to remove the tumor, or close the wound without going further, as a more thorough understanding of the real condition of the tumor might determine.

The nature of the case and the dangers to be apprehended from this operative procedure having been fully explained to the patient and her friends, and they earnestly desiring that we would make the effort to save her life, on February 24, 1870, she was placed under chloroform, and assisted by Drs. Chisolm, Miles, William T. Howard, Griffith, Kloman, and others, I proceeded to open the abdominal cavity by an incision of two inches, along the linea-alba, half way between the umbilicus and pubis.

On entering the cavity there was a great gush of clear yellow fluid, and some two or three gallons must have escaped. When free of this fluid, a ragged, decomposing mass presented at the incision, which readily broke up under the slightest pressure of the finger, and was found to be attached to the right ovary. The abdominal incision was enlarged to about five inches, when this decomposing tumor, containing fluid, and covered in spots with recent lymph, was plainly brought to view, and was in such a state of decomposition that there was nothing left but to remove it.

A strong and well-waxed thread ligature was placed around the pedicle. The tumor was severed, and the ends of the ligature brought out of the abdominal opening.

On examining the left ovary it was found of the size of a

swan's egg, and scirrhus. A ligature was placed around the pedicle of this tumor, the pedicle severed, and the ligature brought out of the abdominal opening, as in case of the other ovary. The abdominal cavity was then thoroughly cleansed, and the abdominal incision closed by interrupted silver sutures.

The ligatures were allowed to hang out of the incision, as a vent for suppuration, and as a point through which disinfectants might be thrown into the abdominal cavity, in case she survived the shock of the operation.

The patient was then put to bed, wrapped in blankets, hot bricks applied to the body and extremities, and stimulants freely given. She died in twelve hours after the operation of nervous shock.

The tumor of the right ovary proved to be cystic cancer of the medullary variety, containing fluid very similar to that in the peritoneal cavity; and hence well calculated to throw obscurity on a diagnosis. The left ovary was scirrhus. We collected of the cyst thirty-four ounces, and much of it was washed away in small pieces and lost.

The prognosis in this case to the patient and her friends, before commencing the operation, was grave in the extreme, and it was one from which any surgeon would very gladly have shrunk; but we must not be too careful of our reputation where there is any chance of saving life in a patient who is otherwise doomed to speedy death. The abdominal incision was intended to be explorative, but when once in, there was no hope left but to remove.

CASE III.

Mrs. B., aged thirty-nine, the mother of six children, all living, from Baltimore county, has led the active and healthy life of a farmer's wife; has always enjoyed the most perfect health up to the birth of her last child, which is now nearly four years old; had a very comfortable time during her last confinement; not the least unpleasant symptom in her recovery; has never been pregnant since.

Soon after the birth of her last child she noticed a swelling

in the median line just above the pubis; insists that it did not commence in either groin, but in the centre of the lowest point of the abdomen; was questioned repeatedly and searchingly on this point, but is positive that it commenced in the pubic, and not in either iliac region.

It grew slowly but steadily until within the last year, when it increased rapidly. Although she had attended to all her family duties up to the time of coming to Baltimore to see me, and was active on her feet, she felt that she was rapidly losing strength, and the burden was such she could not carry it much longer. It was for this reason that she was, with much difficulty, induced to consult me, having a very slim measure of faith that anything could be done for her. She had been in the hands of some good physicians, and many more quacks; had taken from one feminine quack of this city seventy-five bottles of medicine at one dollar per bottle, with perfect assurance that one hundred bottles would cure.

I saw her for the first time October 12, 1870, and on examination, by inspection, palpation, percussion, per vaginam, and per uterum, gave the opinion that it was cystic disease of the ovary, and recommended an operation after the next menstrual period, which was near at hand. There was not one diagnostic symptom absent, except that the first recognition of the tumor was in the centre of the body, and not in either groin. I gave the opinion that there were no adhesions, from the facility with which the abdominal walls moved over the tumor—the absence in her history of any attacks of local peritonitis, and the ease with which the tumor was moved by a finger in the vagina.

The patient was undecided for some days, but finally concluded to be operated upon. Dr. Chisolm kindly saw the case with me, and confirmed my opinion.

From the moment she consented to the operation she gave way to terrible depression of spirits. Nothing that I or her friends could say had the slightest effect to cheer her, and although in her sister's house, and everything was done to keep her cheerful and bright, and although she was assured of almost

certain recovery, and the disagreeable parts of the operation were concealed from her, yet she remained desponding up to the very moment, when she was unconscious from chloroform. This great melancholy was the only thing that made me feel grave as to my prognosis; and I must confess that I was greatly apprehensive from its intensity.

Coming, as she did, from the country, and living while in town at the corner of Cook and Stricker streets (in a very malarious district), I put her on two grains of quinine, half a grain of nux vomica, and a grain and a half of ferrum per hydrogen three times daily. Also, on twenty grains of bromide of potassium, with half a drachm of elixir of valerianate of ammonia at bedtime. These medicines were continued to within three days of the operation. The potash and valerian were ordered for great wakefulness. She had slept very little for some time before coming to Baltimore, and her nervous system was in a most excited state. They had a happy effect, producing plenty of sleep, and much more composure.

Her menstrual period was delayed some days, and the operation was not to be performed till the third day after it had terminated, so that she was not ready till the 31st of October.

The third night before the operation, I gave her three compound cathartic pills, which acted three or four times very freely. For two nights before the operation she took, on going to bed, one grain of opium, and on the day of the operation, one grain of opium an hour before we commenced. She bore the opium well, which was encouraging.

On October 31st she was placed under chloroform in the room adjoining the one in which we proposed to operate, and when fully unconscious, was lifted into the operating room, and placed upon the table before the gentlemen who honored me with their presence. Dr. Barton managed the chloroform, and I was assisted by Drs. Samuel Chew, James Stewart, Kloman, William B. Griffith, and others.

I made an incision two and a half inches long in the linea-alba, at one-third the distance from the pubis to the umbilicus,

having first passed a catheter into the bladder to be sure it was empty. I dissected very carefully after getting through the skin and cellular tissue; realizing how very attenuated the abdominal walls become under such circumstances. I very soon came upon the peritoneum, which was very carefully nicked with scissors, and then slit up on a grooved director.

There was not the slightest escape of straw-colored serum from the abdominal cavity in this case, which is an unusual occurrence. The shining sac of the tumor was prominently before me. My finger, as far as it could reach, and then a curved steel sound, were swept round the tumor, which was found to be free from all adhesions. The patient was then turned gently on her left side, and the tumor tapped by a large trocar and canula. The fluid that escaped was clear and watery. As it escaped the sides of the abdominal walls were compressed by Dr. Griffith, and the sac was seized with strong forceps and pulled through the abdominal incision as it rapidly emptied. It was so managed that not one drop of the contents of the sac escaped into the abdominal cavity.

The pedicle was found to be thick and of medium length. A strong, well-waxed thread ligature was placed around the pedicle close up to the sac. The clamp was then applied between the ligature and abdominal walls, and close up to the former, so as to gain as great a length of pedicle as possible. The pedicle was severed with scissors just beyond the ligature, and the stump touched with undilute persulphate of iron. The tumor was found to grow from the right ovary. The left ovary was examined, and found healthy. Two small pieces of sponge on sponge-holders were passed into the abdominal cavity, to see if there was any blood or other fluid there, and finding none, the wound was closed by three interrupted silver-wire sutures. A large wad of raw cotton was placed over the whole abdomen, and a flannel bandage applied around the abdomen.

The patient was lifted into bed; hot bricks were applied to her extremities, and she was wrapped in blankets. Reäction soon came on; Sims's self-retaining catheter was introduced;

she was ordered a grain of opium every three or four hours, and milk and beef tea as a diet. Room was kept dark, and the patient absolutely quiet.

Her pulse raised up on the second and third day to 120; it then subsided and stood at about 100 during the first week, and fell afterwards to the normal state. She took, in all, fifty grains of opium; had no unpleasant symptom, except (during the first few days) pain in the bowels from distention with gas.

For the first ten days was fed on milk, beef and chicken tea. The milk was only continued for a few days; it seemed to increase the gaseous distention.

The self-retaining catheter was continued for one week, and as she could not pass her water voluntarily after that, it was drawn off twice daily till the fourteenth day, when she took an ounce of castor oil and twelve drops of laudanum. The bowels were thus freely evacuated, and the urine passed naturally, since which time there has been no impediment to the evacuation of either bladder or rectum.

The clamp came away on the fourteenth day; the stitches were removed on the eleventh, twelfth, and thirteenth days—one each day; she sat up on the fifteenth day; was walking about on the twentieth day, and made a speedy recovery.

There are two points of interest in this case: 1st. It is larger than any fluid ovarian tumor of but a single cyst which I have been able to find on record. Kirvish reports one weighing forty pounds. This weighed forty-two pounds. 2d. We are told by my distinguished friend, Dr. Thomas, that when a fluid ovarian tumor gets beyond the size of an adult head, it very rarely remains unilocular. It then becomes multilocular. This agrees with my own experience. This tumor was four times the size of an adult head, and yet there was but a single cyst.

ART. II.—A CASE OF SPINA-BIFIDA. By M. E. POYNTER, M. D., Midway, Ky.

Mrs. T., aged nineteen, was confined for the first time on the 17th of August, 1871, and after eight hours of tolerably painful labor, gave birth to a large, and, in many respects, finely-formed male child, the mother being under the influence of chloroform for the greater portion of the last two or three hours. There was nothing unusual in the presentation, position or duration of the labor, and the placenta was duly cleared away in a few minutes after the birth of the child, which had been assigned to the nurse whilst my attention was given to the mother.

There was nothing remarkable in the appearance or conformation of the child which struck my attention in the hurried movements of severing the cord and handing it over to the nurse, excepting the position and appearance of the lower extremities, which were peculiar, and which I determined to investigate after the comfort and safety of the mother had been secured.

During the process of washing the little fellow, who, in the meantime, was making a loud and persistent protest, and asserting a strong vitality, so far as his lungs could demonstrate that fact, the nurse called my attention to a very large, baggy bundle of skin occupying the region of the loins, and which I had not before noticed; I at once made an examination, and found it the remains of the sac of a tumor, of a large size, which had been ruptured before or during labor, situated over the junction of the spinal vertebræ with the sacrum; I at once suspected *spina-bifida*, and sought the opening in the empty sac, through which I passed my finger, and soon discovered the opening in the walls of the spinal column, which admitted the point of my index finger.

The tumor had evidently been quite a large one, about the size of the child's head, I should judge from the amount of loose integument which had been its covering. I found the base of the tumor to be about four and a half or five inches in

diameter, covering a large part of the sacrum and extending up to the middle of the lumbar vertebræ, and to an equal extent on the sides. Much the larger part of the tumor had been covered by sound, natural skin, whilst the apex and nearly one-fourth of the summit of the tumor was covered by a thin, transparent membrane, which was the seat of the rupture through which the contents had been discharged.

My attention was again directed to the disposition of the lower extremities, before alluded to, which was that of flexion upon the trunk, with the legs crossed after the manner of a tailor, and lying across the body below the umbilicus, the feet being flexed upon the tibia, forming *talipes equinus* of some authors.

If the legs were forcibly extended they would not immediately be drawn up, seeming to want something of their natural power, but would soon assume their flexed and crossed position, never failing to lock themselves as does a tailor. Upon extending the feet they at once returned to their flexed condition with considerable vigor. I noticed also that the cleft between the nates was wanting, the part rounding off from each hip with the anal opening occupying the apex of the rotundity, which opening was of a peculiar ragged or fissured character, and from which several free evacuations occurred. The point of the coccyx was marked by a small dimpled depression, with adherent cuticlular covering.

With these exceptions the child was finely developed, and quite large, and seemed strong and vigorous.

Wishing for time for reflection and reference to authorities, I had the child dressed, simply folding up the loose texture upon the back and surrounding it with a bandage. Upon consulting all the authorities within my reach, I could find treatment recommended for those cases when the tumor was intact—by support with trusses, drawing off the liquid, and injections for radical cure—but not for cases where the *rupture had already occurred*, so that I determined to do what I could, guided alone by my idea of the fitness of things; and therefore

asked my friend, Dr. D. D. Carter, of Versailles, to see the case with me. I had determined to cut down upon the opening in the spinal column, and if I found nothing to contraindicate, to cut away the large quantity of loose integument, and close the wound neatly with sutures, and stay them with adhesive strips, hoping to have union without inflammation; at least it would be running no additional risk, as the rupture had exposed the child to that consequence already. At 5 P. M., fifteen hours after delivery, Dr. Carter came, and with Dr. R. J. Thompson, we proceeded to enlarge the opening in the skin, and upon doing so, found what we might have reasonably expected (but hoped otherwise), a large bundle of nerves issuing from the opening in the bones, and distributing itself upon the inner surface of the tumor. We decided that it would be fruitless and cruel to operate, and bundled the skin up in its former position, and left the little fellow to his inevitable fate. He lived some fifty-two hours after birth, having had convulsions about twelve hours preceding his death. There was a constant discharge of bloody serum from the tumor during his life.

It is somewhat interesting to note some of the pathological conditions growing out of the *waste of nervous tissue*, which occurred in giving the large bundle of nerves to the integument covering the tumor. It will be remembered that the tumor was situated at the junction of the lumbar vertebræ with the sacrum, and that there was evident want of power to contract the muscles of the posterior parts of the legs and feet—the extensors of the lower extremities. I have no doubt but that the *sacral plexus* of nerves was thus lost, in an abnormal distribution, resulting in a congenital want of the great sciatic nerve and its branches, and hence no power of extension in the legs and feet. That the antagonistic muscles were not robbed of their nerve supply was manifest in the constant flexion of the feet and legs, and may be explained by the fact that the crural nerve is derived from the lumbar vertebræ *alone*, the site of the lesion.

In a physio-psychological point of view, the interesting fact

is presented by the good old ladies, who understand all such things so perfectly of a very serious pain and weakness in the back suffered by the young mother during her gestation, and which preyed upon her mind very seriously—*quod erat demonstrandum.*

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ART. III.—LIGATION OF THE LEFT EXTERNAL CAROTID ARTERY FOR SECONDARY HÆMORRHAGE. By HENRY C. GHENT, M. D., Port Sullivan, Texas.

On the 22d of May last Jack Harlan, negro, aged twenty-four years, medium size, rather stout built, perfect health, in a difficulty with Frank Robertson, another "fifteenth amendment," received a wound by the thrust of a dagger, severing either the external carotid artery just before its bifurcation into the temporal and internal maxillary, or the former of these two branches.

The dagger entered on a level with and about three lines in front of the tragus of the left ear, penetrating the space between the meatus-auditorius and the neck of the lower jaw. The wound through the superficial parts was about nine lines in length, and running somewhat perpendicularly.

Dr. Ghent and myself were immediately sent for, but the negro was bleeding so profusely he followed the messenger to our office, a distance of two miles. By this time he was almost exhausted from the loss of blood, his shirt and pantaloons being pretty well baptized with the vital fluid. The action of the heart was greatly depressed.

There were nausea, occasional efforts to vomit, cold extremities, very great thirst, and copious perspiration.

Hæmorrhage having very nearly spontaneously ceased, we decided, owing to this fact and the locality and depth of the artery, not to attempt to ligate in the wound, but resort at once to the use of styptics, a compress and bandage.

It is a rule laid down in surgery, that when important arteries are wounded no styptic applications should be employed,

but immediate recourse had to the ligature, it being safer than all other methods. But it is also a rule never to ligate an artery, however large, in which hæmorrhage has spontaneously ceased, and more especially before Nature has established a collateral circulation. In this case hæmorrhage had almost entirely ceased in consequence of great arterial depression, but the necessity was urgent for something to be done, as promptly as possible, to prevent a return of hæmorrhage on reäction.

Taking this view of the case, a strong solution of the persulphate of iron was made, in which was saturated a sufficient amount of cotton to fill the wound and make suitable pressure against the bleeding orifice, over which was placed a graduated compress, secured by a bandage. By this means the remaining hæmorrhage was most effectually arrested. So soon as reäction was thoroughly established, the patient was carried home, a distance of half a mile.

With quiet, rest, proper diet, and other prophylactics, we expected to prevent a return of hæmorrhage, and no doubt would have done so but for his own carelessness and imprudence. He was very forcibly taught as to the danger of secondary hæmorrhage, especially from the tenth to the fourteenth day, and consequently of the great importance of quietude, rest, and the avoidance of the hot sun. He was also directed not to interfere with the dressings.

No untoward event took place until the evening of the tenth day, when we were summoned to visit the case in consequence of secondary hæmorrhage. Dr. G. being sick, I obeyed the call, and found him bleeding at a fearful rate. Upon inquiry and examination, I found that every important injunction had been disregarded. The compress and bandage had been removed two days previously, and during the tenth day he had been taking horse-back exercise under a hot, burning sun.

Under the circumstances, all that I could do was promptly to use the same remedies which were first applied—styptics and pressure—by which means the hæmorrhage was again arrested. On the 3d of June, 12 o'clock at night, we were again called to

the case, and arrested the hæmorrhage as before. No further trouble until Friday night, the 9th, and then but slight hæmorrhage.

From the various bleedings Jack had lost a very large quantity of blood, in consequence of which he had become considerably emaciated and very much prostrated.

We were now satisfied that the only safe course was to ligate the external carotid artery, being well convinced that styptics and pressure would avail nothing for permanent good in the future.

On Saturday morning, 10th of June, the operation was successfully performed by Dr. Ghent, assisted by Dr. William Kerr and myself.

The patient being laid upon a quilt on the floor (having nothing with which to improvise an operating table), and put thoroughly under the influence of chloroform, an incision was made through the skin and superficial fascia over the triangular space formed by the omohyoid muscle below, digastric above, and the sterno-mastoid externally.

This incision was about two and a half inches in length, running parallel with the mastoid muscle, and about three lines in front of the inner border of the same, commencing opposite the middle of the thyroid cartilage, and terminating near the angle of the jaw.

In dividing the more superficial tissues the grooved director was used to guide the knife, but the deeper structures were passed through by the handle of the scalpel and the fingers. The sheath of the artery being brought to view, it was taken up with the forceps, an opening made, the director passed in, and the sheath sufficiently slit to enable the aneurismal needle, armed with a double ligature, to pass without difficulty. The needle was carefully passed beneath the vessel from without inwards, withdrawn, and the artery tied. The lips of the wound were approximated, and confined by means of three interrupted sutures. Gave one-fourth of a grain of sulphate of morphine, and directed cold-water dressing.

In the operation itself there was not half an ounce of blood lost, but hæmorrhage from the original wound occurred during the operation, from which there must have been a loss of sixteen ounces.

Eleventh, passed a quiet night; slept well. Complains to-day of some soreness of the wound and a little difficulty in swallowing. No fever; pulse good; feels like eating; directed light but nutritious diet; continued cold-water dressing.

It is unnecessary to note the progress of the case from day to day, as nothing occurred worthy of record from the date of the operation to the restoration of the patient to complete health. The original wound healed rapidly, and that made in the operation healed by first intention, except a small point occupied by the ligature. The ligature came away on the thirteenth day.

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ART. IV.—A CASE OF TETANUS (TRAUMATIC)—RECOVERY. Read before the Boyle County Medical Society September 19, 1871. By JOHN D. JACKSON, M. D., Danville, Ky.

On Tuesday, August 22d, 1871, I was called to see Philip Russell, a negro boy aged fourteen, of delicate build, though generally enjoying good health, who seemed to be suffering from intestinal colic.

The day previous I had prescribed for him without seeing him, his mother telling me that while he was walking on the streets he was suddenly seized with "a cramp in the stomach; was bent double, and had to be carried home." On questioning her, I learned that he had been indulging (with the usual freedom of boys of his age) in watermelons, muskmelons, and the fruits of the season, and had, on this information, prescribed a purgative by the mouth, and hot fomentations to the abdomen. On visiting him on the next day (22d) they told me that his bowels had acted freely, but that since the purgation he every now and then had some pains; that he had had none so severe as the one on the street. On examination, I

took him to be suffering with simple intestinal colic, a continuation of the irritation of the day previous, and in accordance with this view, prescribed a few doses of Dover's powders, to be used as the severity of his symptoms might seem to demand.

On Friday, the 25th, I was sent for to see him, being informed that his symptoms had all grown worse.

Upon visiting him I found him lying on his back, with his limbs stretched out, countenance slightly anxious, and occasionally undergoing slight contractions, as if suffering pain, and during the few minutes I sat by the bedside, there were several convulsive jerkings of the body, accompanied by enough of pain to make him cry out slightly. On asking him the question, he told me that it gave him great pain on being moved, bringing on the pains in his bowels and elsewhere. His pulse was 70 to the minute; temperature, 99° F., respiration 24; tongue moist and but little furred. His jaws seemed stiff on opening his mouth, and he was unable to open them to their full capacity. His sterno-cleidomastoid muscles were rigid, and he swallowed with difficulty.

The marked tetanic rigidity was certainly, to me, suggestive of more than reflex irritation from undigested food, and I inquired if he had recently received any hurt, or had any sores upon him. The father and mother of the boy replied that he had not been hurt, and that there were no sores upon him. I simply recommended a continuance of the Dover's powder.

On Saturday, the 26th, I again visited him, and found him sitting up in a chair, perfectly stiff, and unable to rise without assistance. The muscles of the neck were stiff, abdominal muscles rigid, and all the muscles of the back entirely so. Can open his mouth half way, but not farther; sterno-cleidomastoid muscles very rigid. His mother says that he has had no violent spasm since I was present yesterday. Pulse, 70; temperature, 98; respiration, 24. Placed him upon his feet, and tried to get him to walk to his bed, but he could not, the voluntary muscles becoming at once rigid and immovable. On being placed in bed the spasmodic state wore away, but the muscles of

the back of the neck, the small of the back, and the abdomen, remained exceedingly rigid. On making him try to bend his chin to the sternum, found that it was impossible for him to do so, even with my assistance.

This exceeding rigidity of the muscles of the neck bore such a similarity to certain cases of cerebro-spinal meningitis which I had seen, that I was forcibly reminded of that disease, but the rigidity of the sterno-mastoid and abdominal muscles, with those of the lumbar region, together with occasional flittings of the *risus sardonicus* over his countenance, pointed with no very hesitating finger to tetanus, yet I had been told that he had received no injury.

I now resumed my inquiries, and by asking very especially, was told that on the Friday previous (five days anterior to my first visit, and four prior to his being seized upon the street (he had cut his foot (the sole) on a piece of glass; that it had bled pretty freely at the time, but had healed up in a day or two, and gave him no trouble subsequently, the fact having passed out of their minds until I had questioned them emphatically. On examination, I found a scar on the sole of his right foot, the wound having healed entirely, and there being no tenderness on pressure. There were, however, some two or three scabs of the size of a split-pea, on each shin, which might have been from scratching flea-bites, so slight were they.

The case was undoubtedly one of traumatic tetanus. Indeed, so strongly had the symptoms presenting on the day previous pointed to tetanus, despite my inability at the time to trace them to any traumatic cause, that I had taken with me a medical student, who had just recently finished reading Erichsen's description of the disease, expecting to be able to present him a practical illustration of his hitherto only theoretical knowledge. I might say, that though I had left him in entire ignorance of what he was to find, the *tout ensemble* of symptoms was sufficiently striking to his mind to cause him to answer "*tetanus*" when I called for a diagnosis.

I prescribed for the patient perfect rest in bed, and

℞.—Quin. Sulp., ℈j.;
Pulv. Ip. et Opii., ℈ij.;
M. ft. chts. No. x.

Sig.—One every three hours.

*Evening*, 6½ *o'clock*.—Rigidity of muscles greater, opisthotonos exceedingly marked; small of the back does not touch the bed at all; pulse 70; temperature 98; respiration 24; has spasmodic jerkings at intervals.

*Sunday*, 27*th*.—Rested well last night; had occasional "cramps," as the attendants call them, but not violent enough to prevent a refreshing night's sleep. Pulse, 70; temperature, 98; respiration natural. Muscles of back intensely rigid; cannot put chin to breast, nor can he raise himself up in bed. On attempting to assist him to do so, becomes at once rigidly stiff in body, neck, and legs, so that perseverance would have raised him up on his feet, and not his nates. It is scarcely an exaggeration to say that he might in all probability have been seized by the feet or head, and held out at arm's length, and he would have remained extended, "as stiff as a poker." Any attempt at moving him brings on spasmodic contraction of the muscles of the body and lower limbs, and of the arms to a slight extent. More than once he has bitten his tongue by sudden involuntary closure of the jaws. He can open his jaws to one-third their natural capacity of separation. The *risus sardonicus* is very marked, and almost constantly present. Has not evacuated his bowels, though has emptied his bladder several times, though having to stop several times in the effort on each occasion. His appetite continues good, and I ordered him full and generous diet, with a regular continuance of yesterday's prescription.

*Evening*.—Pulse, 74; temperature, 98; has passed the day pretty comfortably, with no very violent "cramps."

*Tuesday*, 29*th*.—Rested well last night, and ate a hearty breakfast this morning. Pulse, 90; temperature, 98; respiration, 24; attribute the rise in pulse to his recent breakfast. General condition not materially varying from previous state,

excepting that the abdominal muscles seem less tense. On attempting to move him, however, rigidity is at once brought about. Recipe continued.

*Evening.*—Think there is less rigidity, and can open his mouth wider. Pulse, 84; temperature, 98.

*Wednesday, 30th.*—Pulse, 83; temperature, 98; respiration 24. Attendants say that he rested well, but find him with rather more rigidity than on yesterday, and cannot open his mouth so widely. Says that he sweated last night, which is the first time that he has been noticed to perspire since the commencement of his illness. Appetite yet continues good, and have prescribed a continuance of full diet and medicine.

*Evening.*—Passed the day pretty well, his father placed him in a chair, and he sat up some time. He can put his chin to his sternum with a great effort while he lays upon his back, but cannot do so when placed upon his side. The position on the back seems, by the weight of his body, in some degree to counteract the tension of the extensor muscles of the back of the neck and body, for, when placed on his side, his head is drawn backwards, and opisthotonos at once becomes marked. Pulse, 96; temperature, 98. Recipe continued.

*Thursday, 31st.*—Rested well; rigidity continues, and is especially marked in the muscles of the back, abdomen, and adductor muscles of the thighs. Mouth less widely opened than upon yesterday. Appetite good; swallows without difficulty, though during the first few days of his illness this was not always the case. Pulse, 96; temperature, 100. Recipe continued.

*Evening.*—Condition as in the morning. Pulse, 90; temperature, 97½.

*September 1st.*—Rested well last night. Bit his tongue this morning, a thing he has done several times since his illness. Rigidity less than hitherto, and can open his mouth nearly naturally. Recipe continued.

*Evening.*—Pulse, 80; temperature, 97 4-5ths. Has been sit-

ting up. Had a slight alvine evacuation; the first he has had for eight days. Appetite still continues good, and I encourage him to eat all he desires.

*September 2d.*—Rested well last night; rigidity of back continues, but he can now almost overcome it voluntarily in trying to raise himself erect in bed.

*Evening.*—Pulse, 76; temperature, 98; had a copious alvine discharge to-day. Has set up the greater part of the day, and I find him sitting up on making every visit. On having him to stand erect and try to walk, upon taking the second step, he was suddenly seized with opisthotonos, and jerked backwards violently to the floor, striking his head against a table in the fall. Recipe continued.

*September 3d.*—Rested well last night; no bad after consequences succeeding the fall of yesterday evening. Pulse, 80; temperature, 97½; muscles still rigid; can open mouth about naturally. Recipe continued.

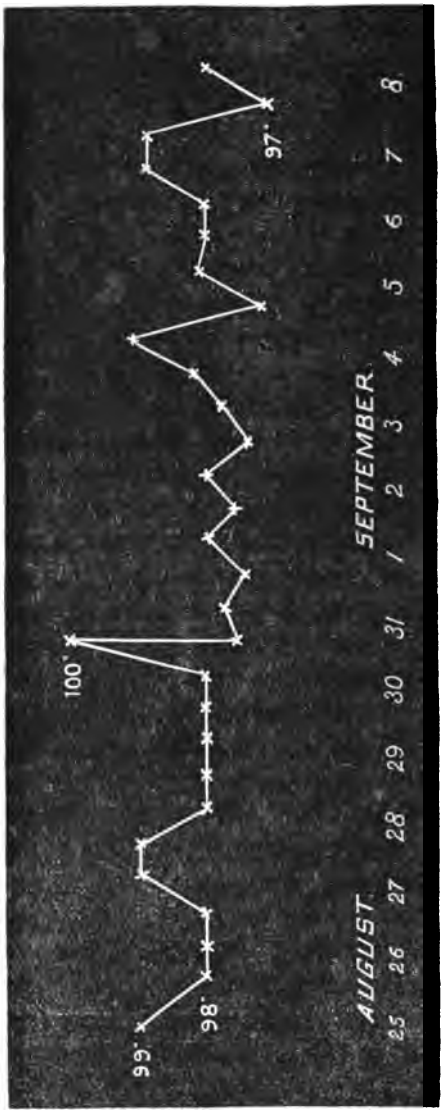
*Evening.*—Sitting up. Pulse, 74; temperature, 98; comfortable. Made him take a few steps, in the meanwhile holding him. Walks with great difficulty, and bending himself much forward in the act. Recipe continued.

*September 4th.*—Pulse, 80; temperature, 97 2-5ths. Rested well, and found him sitting up. On making him try to walk, while stepping, he was suddenly seized with opisthotonos, placing his hand upon his belly, and had to be placed back in his chair; the abdominal muscles became very rigid for the time being. Recipe continued.

*Evening.*—Pulse, 90; temperature, 97 4-5ths. Two actions from his bowels to-day. Doing well, though rigidity of back and abdomen continues; can, however, now put his chin to his breast with ease.

*September 5th.*—Pulse, 84; temperature, 98 1-5th. Doing well.

*Evening.*—Pulse, 85; temperature, 99 1-5th. Improving;




can now raise himself up to the sitting posture in bed unassisted, and can open his mouth nearly naturally; however, it only requires one to touch his back to have the muscles there to instantly become rigidly contracted.

From this date on the patient continued regularly to improve, the tetanic symptoms growing milder daily. From the day following, all medicine was stopped, though he was watched critically for a few days, to observe whether, on its suspension, there would be an increase of symptoms, but there was none. For several days his walking was very slow and difficult, not apparently from any lack of strength, for all the while he was well nourished; eating, indeed, heartily at nearly every meal, and not becoming in the least emaciated, but his difficulty of walking was caused, seemingly, because of a lack of proper balance of power between the extensor and flexor muscles. The position he constantly assumed was that of an old man bent with age, legs widely apart, and leaning forward, and he feared to take a step unless holding to the hand of some one, or a piece

of furniture at first, but after a few days he trusted himself with a stick, and finally walked alone, though before he reached this point he several times fell, or was jerked down, as he expressed it.

*Commentary.*—On June 22d, 1869, we read before this Society an account of the case of William Johnson, and which was published in the "Richmond and Louisville Medical Journal" for September of the same year. It will be recollected that Johnson was treated with the calabar bean, and that he died. Since the record of that case (September 28, 1869,) we were called in consultation with Dr. Edw. Daily, of Stanford, to see a white boy, about fourteen years of age, suffering with tetanus consequent on an incised wound of the foot made by an axe. The calabar bean was the main remedy used in his case, but, as we afterwards learned from Dr. D., he only lived a few days.

When we first saw the case of Philip Russell, and prescribed the quinine and Dover's powders, it was because at the time the bean was not procurable. Notwithstanding the failure of the medicine to effect a cure in the two instances coming under my own personal observation, yet statistics as far as published, and the physiological effect of the remedy as we had witnessed it in one of the cases, made it, to our mind, still the most reliable of therapeutic agents. However, finding the patient to progress well under the medicine prescribed at first, it was regularly continued until he seemed to be out of danger.

An interesting phase of the disease, that which we think makes it most worth reading, is the thermometrical aspect of it. The daily record of the temperature, taken with a tested English self-registering thermometer, graded to the fifth of a degree, and which was kept for five minutes in the axilla at each operation, showed, with the exception of three days, the absence of anything like a febrile condition, but that the heat of the patient was rather *sub-normal* than the reverse.

Now, we have been unable to find out the thermometrical natural history (if we may so express ourselves) of tetanus.

Regularly recorded daily observations of cases dying or recovering, we do not now recollect of seeing. The thermometer as one of the clinical aids, daily and hourly relied upon by the physician, was not in common use when Curling wrote his celebrated monograph, and in the thermometrical diagnosis published last year by Dr. Fox, of the Bristol Infirmary, England, there is no table of tetanus. A reference to that splendid monument to the industry of Wunderlich—"Medical Thermometry," a work recently translated by the New Sydenham Society, and which should be in the hands of every practising physician in the land, gives no daily thermometric record of the disease—though he tells us that, "in the last stage of fatal neuroses, and particularly in *tetanus*, although met with in very many other disorders of the nerve-centres (of the brain), the temperature begins to rise, and rises in the briefest space of time to extraordinary heights; to heights, indeed, which are only exceptionally reached in diseases which are distinctly of febrile origin (sometimes to 112.55° Fahr., which is usually succeeded by a still further *post mortem* rise of temperature, amounting to a few tenths of a degree)."*

What of the temperature in those cases which have recovered, he does not tell us. We now place on record the daily registration of the temperature of this, a case of recovery, as a contribution to the natural history of the disease, hoping that possibly it may in the future prove useful in the prognosis of the affection, if not in its therapeusis.† How much the medicines used contributed toward the recovery of our patient, I will not at all positively affirm. It may be that it should justly count for very little, and we are certainly not inclined to lay any very great stress upon it, in the face of the fact that immense doses of far more powerful medicines have been so generally used in vain in this disease. The favorable progress of the dis-

* Medical Thermometry—Wunderlich. New Sydenham Society, 1871, p. 425.

† In the two cases we have above alluded to as ourselves observing, the temperature when examined was 101 each time.

ease under the prescription with which we commenced, we thought demanded its continuation, and we did not feel justified in laying it aside until the patient seemed to be out of danger. We ought to say, with reference to quinine, that in a tabulated collection of some three hundred and fifty odd cases of tetanus which we have in our possession, among the multitude of remedies used, we find one case in charge of M. Haynes Walton,* in which quinine alone was the remedy, and which was given in doses of ten grains three times daily. The case, though a severe one, recovered.

The chances for recovery in traumatic tetanus have been observed to be directly connected with the length of time elapsing between the occurrence of the wound and the development of the tetanic symptoms, the longer the time, the better have been supposed to be the chance of recovery. Doubtless the "colic spell" of Philip, as it was supposed to be, when he was seized upon the street, was really a tetanic seizure, and occurred upon the fourth day after his injury, and most probably there were other evidences of the disease before this time. According to rule, his chances of recovery, being seized so early, were bad. However, in sixty-one cases of recovery from tetanus which we have tabulated, we find that in seven of them the disease manifested itself on or before the fourth day after the injury.

* Vide Medical Times and Gazette, November 14, 1858.

## ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—A NEW METHOD OF ARRESTING SURGICAL HÆMORRHAGE BY THE ARTERY CONSTRICTOR. Designed for the Instantaneous Hermetic Closure of Arteries, without the Use of Ligature or other Foreign Substance, to be Left in the Wound. An Essay to which was Awarded the Merit H. Cash Prize, by the Medical Society of the State of New York, February, 1871. By S. FLEET SPEIR, M. D., Surgeon to the Brooklyn City Hospital; Surgeon to the Brooklyn Eye and Ear Infirmary; Surgeon to the Tumor and Cancer Department of the Brooklyn Dispensary; Fellow of the New York Academy of Medicine; Member of the New York Pathological Society, etc., etc.

The armamentarium of the Profession is already so burdened with instruments of every variety of form and similarity of use that the introduction of any new instrument can be excused only on the ground that it enables us to accomplish the object in view more rapidly or more perfectly than heretofore.

The arrest of arterial hæmorrhage is a subject of intense interest to every surgeon; it is attended, at times, with such hazards to the patient, and with such difficulties to the surgeon, that a new method of accomplishing it may not be found unacceptable; the more especially as this method claims to have fulfilled the indications which are considered as those most to be desired by the surgeons generally—viz., the closure of arteries by some method which leaves no foreign substance attached to the vessel or in the wound, and is, at the same time, proof against secondary hæmorrhage.

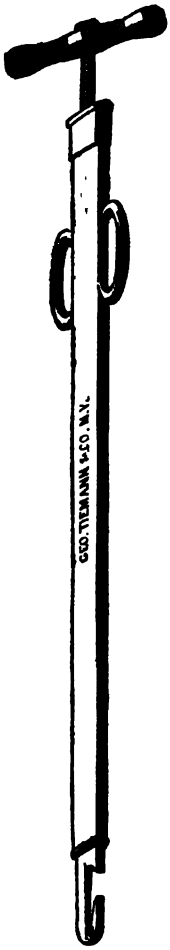
It is claimed in the following pages that such a result can be uniformly arrived at by the use of the instrument herein described as the artery constrictor.

This instrument is offered as a substitute for the ligature, acupressure, and torsion.

It combines the most important principles of them all, and it is believed that it will be found a more ready method for the hermetic closure of arteries.

DESCRIPTION OF THE ARTERY CONSTRICTOR.

The artery constrictor consists of a flattened metal tube, six inches (more or less) in length, open at both ends, with a sliding steel tongue running its entire length, and having a vice arrangement at the upper extremity, by which it can be made to protrude from or retract within the tube or sheath. The lower end of the tongue is hook-shaped, so as to be adapted to the artery to be constricted. It is so shaped that, having grasped an artery, it can be made to contract upon it by means of the vice at the upper end, which forces it within the sheath.




The hook of the tongue is so shaped and grooved as to form only a compressing surface, by which means the artery, when acted upon by the force of the vice, is compelled to assume the form of the curve of the tongue, and the artery is constricted in such a way that its internal and middle coats give way, but the external coat is preserved intact. The severed internal and middle coats contract, retract, curl upon themselves, and are driven down the artery in the form of a plug by the continued pressure of the grooved tongue as it passes on into its sheath. The artery may now be slipped out of the instrument, and it will be found that the external coat has been compressed at the point where it was in contact with the instrument, and the internal and middle coats will be found severed and invaginated on either side of the constriction. This invagination of the internal and middle coats is of itself sufficient to arrest the flow of blood; and as soon as the current of blood is arrested in the vessel, a coagulum forms upon the invaginated surface of the internal and middle coats, and this completes the occlusion of the artery.

It will be seen that the principle upon which the artery constrictor acts is the same as that which Nature follows in her efforts to restore the integrity of a divided artery and arrest hæmorrhage. It is based upon the anatomical structure and peculiar properties of the arteries, and is, in fact, the principle upon which all successful methods for closing arteries are based.

The principal methods at present in use for the arrest of arterial hæmorrhage are three in number—viz., ligature, acupressure, and torsion.

1st. *The Ligature.*—This method, which was introduced in the sixteenth century by Ambrose Paré, has accomplished all that was expected of it. It still claims the first place in the list. The ligature is, in general, safe, practicable, and efficient, and it will doubtless sustain its reputation through all time. Yet there are occasions when it is found not to be all that is wished for, and other methods may be found more desirable.

The action of the ligature may be briefly stated as follows: A firm ligature, tied around a healthy artery with considerable force, cuts the brittle structure of the internal and middle coats, while it leaves the external and strongest coat of the artery intact, but firmly compressed in the knot. The drawing together of the knot favors the tendency of the internal and middle coats to contract and retract. The current of blood being arrested in the end of the vessel, a coagulum quickly forms upon their rough edges, and thus the process is complete. The subsequent changes, inflammation, etc., which occur within and around the vessel, do not concern us at present.

The steps in the process may be summed up thus:

1st. Division of the internal and middle coats.

2d. Retraction and contraction of the internal and middle coats.

3d. The internal coagulum.

4th. The support furnished by the external coat and the ligature. The ligature is finally removed by a gradual process of sloughing, and is discharged from the wound.

2d. *Acupressure.*—Next in importance to the ligature comes acupressure, originated in 1860 by Professor Simpson; it has since been practised successfully by many surgeons, and is recognized as a reliable method of arresting hæmorrhage. It can never be universally applicable, however, and perhaps the same might be said of any method.

The action of acupressure upon the artery is, in the main,

similar to that of the ligature. There are, however, fewer steps in the process.

Dr. Hutchison, in his admirable essay on Acupressure, says: "When acupressure has been employed, the internal surfaces of the artery have merely been placed in contact." "The needle, like the ligature, does the office of the external coagulum which forms when bleeding ceases spontaneously." "The blood between the needle and the first branch above becomes stagnant, and an internal coagulum is allowed to form." Adhesive inflammation is also excited by the pressure of the needles pressing the walls of the vessel together, and by the irritation resulting from the division of the artery, causing adhesion of the walls of the vessel to each other, and of the outer coat of the sheath, or other immediately adjacent tissues."

The advantages claimed for acupressure over the ligature are as follows:

1st. It is more simple, efficient, and easy of application.

2d. Secondary hæmorrhage, phlebitis, etc., are not so likely to occur with acupressure as with the ligature.

3d. Acupressure can be applied in some cases when the ligature cannot; for example, when the arteries are diseased or when the artery cannot be reached to apply the ligature.

4th. The needles can be removed in a few hours or days, thus leaving the wound free from all foreign bodies at a comparatively early period, a condition favorable to the union of the wound by the first intention.

3d. *Torsion.*—Torsion has been practised as a means of arresting hæmorrhage, with more or less success, for a long time, and was reintroduced to the notice of the Profession by Thierry, Amussat, Velpeau, and others.

It is especially applicable to medium or small-sized arteries, and can never rank with the ligature or acupressure. Its chief advantage is its simplicity.

The mechanism of torsion consists in:

1st. The rupture of the internal and middle coats.

2d. Contraction and retraction of the internal and middle coats.

3d. The drawing together and twisting of the external coat.

4th. The formation of the internal coagulum.

It will be seen that torsion is no mean process. It can boast of all the advantages of both the other processes for closing arteries. Its failure as a hæmostatic process is not due to any inherent weakness, but rather to the difficulty of effecting all the steps of the operation with accuracy.

It is very difficult to perform the operation of torsion perfectly; even experienced operators find that they frequently fail.

The instruments used are very crude—a pair of forceps! When, however, the operation is performed with care, and it is complete, the effect is quite as certain as that produced by either of the other procedures.

Having given this short review of the leading methods of closing arteries, let us see what is the real difference in their claims, and determine their relative advantages by a comparison of the mode of action, and the advantages and disadvantages. Thus:

*The ligature acts by*

1st. Division of the internal and middle coats.

2d. Contraction and retraction of the internal and middle coats.

3d. Coagulum formed in the interior of the vessel.

4th. Support furnished by the external coat and the ligature.

Advantages claimed for the ligature are:

1st. It is safe.

2d. It is efficient.

3d. It is easily applied.

4th. It requires but little skill or practice in its application.

The disadvantages of the ligature are:

1st. It cannot be always applied to diseased arteries with safety.

2d. It tends to prevent union by the first intention.

3d. It is liable to cause pyæmia and phlebitis.

*Acupressure acts by*

1st. The contact of the internal surfaces of the artery from pressure of the needles.

2d. Coagulum formed in the interior of the vessel.

3d. Adhesive inflammation excited by the pressure of the needles.

Advantages claimed for acupressure are:

1st. It is efficient.

2d. It is safe.

3d. It is easily applied.

4th. There is less risk of pyæmia, etc.

5th. It favors union by the first intention.

The disadvantages of acupressure are:

1st. It cannot be applied in all situations.

2d. The danger of secondary hæmorrhage should the clot fail to form, or should the clot break down from granular degeneration, or the needles be withdrawn two early.

3d. The time required, necessary instruments, variety of methods, and skill requisite for its proper performance.

*Torsion acts by:*

1st. Rupture of the internal and middle coats.

2d. Contraction and retraction of the internal and middle coats.

3d. The drawing together and twisting of the external coat.

4th. The internal coagulum.

Advantages claimed for torsion are:

1st. It is easily applied.

2d. It favors union by first intention.

3d. There is no risk of pyæmia, etc.

4th. In appropriate cases it is efficient and safe.

Disadvantages of torsion are:

1st. It cannot be applied to diseased arteries, or to arteries in their continuity.

2d. It is only applicable to arteries of medium size.

3d. The end of the artery is liable to be strangulated by too much twisting, and act as a foreign body in the wound.

4th. The want of a perfect method for its performance.

In looking over these methods for the arrest of hæmorrhage, we are struck by the simplicity and efficiency of the two last; and by the fact that in reality but very little is required of art to arrest hæmorrhage, even from large vessels. The provision for the success of our efforts has been made, to a great extent, by nature in the anatomical structure and properties of the arteries.

The most simple of them all has quite as much to recommend it as the most complicated.

All of these methods have certain disadvantages which limit their application. None of them can be used with the same advantage in all cases, and there is yet room for improvement in the means at our disposal for the arrest of surgical hæmorrhage; at least, we can see no objection to offering for trial the method applied by the artery constrictor.

Based upon the same principles as the other procedures, it includes more of the combined advantages claimed for them than any one method alone.

The artery constrictor acts by:

1st. Rupture of the internal and middle coats.

2d. Contraction, retraction, and curling up of the internal and middle coats.

3d. Drawing together of the external coat over the internal and middle coats, causing them to become invaginated, while the external coat is drawn over them and firmly compressed.

4th. Formation of an internal coagulum.

5th. Maintaining the integrity of the external coat, and preserving the continuity of the vessel.

Advantages claimed for the artery constrictor are:

1st. It is efficient.

2d. It is safe.

3d. It is easily applied.

4th. No internal coagulum is necessary, as the invagination of the internal and middle coats is sufficient to arrest hæmorrhage; it is, therefore, applicable where the blood is anæmic, etc.

5th. No foreign body is left in the wound, thus favoring union by the first intention.

6th. There is no risk of pyæmia or phlebitis.

7th. It is applicable to all sizes and to all conditions of the arteries where the external coat is perfect.

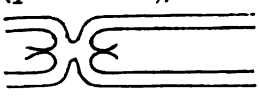
8th. It is a mechanical appliance which has a uniform effect, and it requires but little skill or practice in its application.

These are advantages which can be claimed by no other method, and if the instrument sustains itself in the hands of others, as it promises to do, it will be found useful in many cases where neither of the present modes of closing arteries could be equally well applied.

I have had occasion to make the following severe trials of the artery constrictor. The instrument has the same effect upon the dead artery as upon the living, but it acts more perfectly upon the living vessels.

EXPERIMENTS UPON DEAD ARTERIES.

Applied to the femoral or other large-sized artery of man (*post mortem*), it had the effect (represented in the accompanying cut) of perfectly closing the vessel, so that it resisted the flow of water forced into it by means of a Davison syringe. This experiment I have repeated frequently, and always with the same result.



EXPERIMENT UPON A LIVING DOG.

The constrictor applied to the abdominal aorta of a living dog, closed the vessel perfectly—no blood escaped from the constricted end—which could be seen pulsating till the animal died from the combined effects of chloroform and the operation.

EXPERIMENTS UPON LIVING SHEEP.

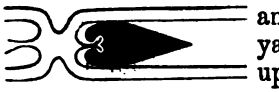
In the month of December the following operations were performed upon the carotid arteries of full-sized sheep:

The common carotid artery was constricted in its continuity as rapidly as possible, and the constricted portion removed at once. This operation was performed to see the immediate effect upon the vessel, and the rapidity with which the coagulum would

form. Upon examination of the specimen, a perfect invagination of the internal and middle coats, at the point of constriction, and a firm clot on either side of it, closing the vessel perfectly.

OPERATION ON CAROTID ARTERY OF SHEEP, IN SECTION.

After the above operation the artery was, of course, exposed in such a way that it bled freely from both ends; the constrictor was applied to them with the effect of closing them perfectly,



and the sheep was allowed to run in the yard while another sheep was operated upon; and then the animal was killed, and the artery examined. It was found closed by the invaginated internal and middle coats, and a firm clot covering them, as represented in cut.

OPERATION ON CAROTID ARTERY OF SHEEP, IN SECTION.

On another sheep the carotid artery was exposed and cut entirely across. The constrictor was then applied to both ends of the vessel, with the effect of perfectly closing the vessel. The animal was killed soon after, and the arteries were found occluded by a firm clot, as represented in the cut.

CAROTID ARTERY OF A HORSE CONSTRICTED IN ITS CONTINUITY.

On the 11th of November a large-sized horse, in good condition, was placed at my disposal by the kindness of Drs. A. Large and A. Liautard, of the New York Veterinary College, and the following operations were performed in the presence of these gentlemen, Dr. Robert F. Speir, Dr. Robinson, and a class of students. Dr. Liautard cut down upon and exposed the left carotid artery in a very skillful and careful manner. I applied the constrictor to the artery in its middle third, in its continuity; the constrictor being put upon the artery, and removed as soon as the screw could be turned to the required extent, which took only one minute and thirteen seconds.

Dr. Large examined the facial artery after the operation, and found that there was a diminution in its force, as much as could be expected considering the extent of the collateral circulation through the vertebral artery. The wound was closed by Dr.

Liautard, and the horse was led to his stall. No untoward event occurred after the operation, and on the 25th the wound had entirely healed, and the animal was ready for the second operation, viz:

CONSTRICTION OF THE CAROTID ARTERY OF A HORSE—THE ARTERY BEING CUT ENTIRELY THROUGH WITH THE KNIFE—NO HÆMORRHAGE.

On the 25th of November the same horse was operated upon as follows: Dr. Liautard exposed the right common carotid for about two and a half inches in its middle third. I applied the constrictor at two points, about one inch and a half apart, and then, with the knife, divided the vessel between them. The artery immediately contracted at each end, the distal end being drawn up in the neck. The cardiac end retracted downward, but was at once projected into the wound again by the force of the heart's action, and it could be seen pulsating in keeping with the action of the heart, rising and falling one-half inch with every beat of the heart. Not one drop of blood escaped from the end of the artery. On the contrary, the cardiac extremity, which was seen beating in the wound, presented the yellowish-white color of the inner coats which were exposed by the operation. The wound was kept open, and the artery exposed, that it might be observed by a class of veterinary students; and then Dr. Liautard brought the wound together with the sutures, and the horse was led to his stall, looking quite sleepy from the effects of the operation. There was no hæmorrhage from the wound or the artery; and in twenty-two hours the horse died from the effect of the operation, the other carotid having been tied previously.

Dr. Liautard removed the arteries, and we examined them together.

The first specimen, from the left carotid

tied in its continuity, exhibited the effect of the constrictor upon an artery when applied in its continuity—viz., division of the internal and middle coats, with a continuous and uninjured external coat. The clots in this artery were small and easily washed out by a current of water. This operation was such as would be appropriate in the treatment of aneurism.

The second specimen—right carotid constricted in section—exhibited the effect of the constrictor upon the artery when applied to it in section, as would be appropriate in amputations. The divided artery was found separated about one and a half inches; both ends were closed and occupied by a firm clot, which, with the invaginated internal and middle coats, had effected a complete occlusion. There had been no hæmorrhage from either end of the artery.

Considering the large size of the carotid in the horse, I think this test may be fairly considered a very severe one. The appearance of the artery is well shown in the accompanying cut, p. 503.

I am not aware of any other means by which so large a vessel could be closed so rapidly and so perfectly. The advantage of leaving the wound free from foreign bodies was plainly indicated in the rapidity with which the wound healed after the first operation—a part of the wound closing by the first intention—a rare occurrence in the horse.

AMPUTATION AT THE HIP—CONSTRICTION OF THE FEMORAL AND PROFUNDA ARTERIES.

On the evening of Saturday, October 8, 1870, a boy was run over by a street car, and taken to the Brooklyn City Hospital. Dr. Cochran, the surgeon then on duty, being sick, requested me to see the patient for him. I found the left limb terribly crushed; the knee-joint was disarticulated, and the soft parts of the thigh lacerated to such an extent as to allow the femur to project from the wound several inches, the leg being attached to the thigh by a band of skin and a few shreds of bruised tis-

sue. The only chance for the boy seemed to be amputation at the hip, which I performed at once. As soon as the anterior flap was made, the femoral artery and the profunda artery were taken up, and the artery constrictor applied to them, the effect of which was to arrest hæmorrhage from these vessels entirely. They were left in this condition until the remainder of the operation—the formation of the lower flap and the disarticulation of the head of the bone—was completed, and the wound washed and ready for coäptation. All this time the ends of the arteries constricted could be seen pulsating in the wound; those present of the resident staff of the hospital and myself were satisfied with the security of the vessel. However, considering the circumstances in this case, I was not willing to trust to the constrictor, feeling that it would be injudicious to do so in the absence of any of my colleagues, and especially as I knew of the objections of Dr. George Cochran, for whom I operated, to any method of closing arteries other than by the ligature. This, added to the fact that it was an accident case which might involve litigation, induced me to finally apply ligatures, and close the wound as usual in such cases. I removed a portion of the profunda artery which had been constricted. The femoral artery being short, I did not feel at liberty to remove a portion of that vessel.

AMPUTATION OF THE THIGH—CONSTRICTION OF THE FEMORAL ARRTEY.

On the 8th of December, C. W., aged fifty-four, was brought to the Brooklyn City Hospital with a compound comminuted fracture of the leg. Dr. D. E. Kissam, visiting surgeon then on duty, hoped to save the leg, and treated it with this end in view; but symptoms of gangrene appearing, it was decided to amputate at the thigh. On the 12th of December this operation was performed by Dr. Kissam amputating the thigh at its lower third, after the circular method. At the request of Dr. Kissam I closed the femoral artery with the constrictor, this vessel being the only artery exposed. The femoral vein, which bled more than usual, was also closed by the constrictor. The

result gave the same satisfaction as in the other cases. The wound was then washed and left open for a few moments to see if all was secure. Meantime the artery was seen pulsating in the wound perfectly occluded, not a drop of blood having passed from it after its constriction. The wound was then closed by sutures after the usual manner. The condition of the patient being bad, and reäction after the operation being difficult, but little hope was entertained of his recovery, a condition of things which created considerable anxiety as to whether this might not be too severe a test for the constricted artery. Finally gangrene set in in the stump, notwithstanding which, and the "open" condition of the wound which followed such a condition, there was no hæmorrhage. The patient died three days and sixteen hours after the operation.

The artery was removed from the stump, and it was found perfectly closed by the invaginated internal and middle coats, and a firm clot, as represented in accompanying cut.

In 1793 Deschamp invented his instrument for the immediate compression of arteries, "by which the artery was to be compressed against a horizontal bar by the tightening of a ligature, the ends of which were passed through openings in the bar, and secured at the top of a vertical stem of the instrument." Since this time there have been many attempts to produce a reliable substitute for the ligature. In the present paper it is not intended to enumerate these methods, but it may be stated that they have nearly all been based upon principles which depend for their success upon a force applied to the artery for a considerable period of time, and requiring to be withdrawn subsequently. One of the methods noticed in this paper (torsion) is an exception to this statement. Webber's intracisor and anti-ligature forceps are also exceptions to this statement. Whether or not there are others, I am not aware; certainly none have been presented to at all compare with torsion in this respect.

The fact that such efforts have been made to secure the advantages of the ligature without any of its disadvantages, shows plainly that the minds of practical surgeons have long been impressed with

the possibility of closing arteries by some method better than the ligature. Certainly no unprejudiced surgeon would deny that the ligature often interferes greatly with the healing of wounds, maintains suppuration by acting the part of a seton, increases the chances of pyæmia, and sometimes causes secondary hæmorrhage.

The primary effect of the ligature is so satisfactory, and it appeals to one's sense of present security to such a degree, that we are very likely to overlook the accidents which sometimes follow as the direct consequence of its use, but which are often attributed to other causes. The surgeon is not likely to feel that any great responsibility rests upon him should a patient upon whom he had operated die of pyæmia or secondary hæmorrhage after the amputation of a limb, although it may be traced directly to the use of the ligature.

The same surgeon would view his responsibility in a very different aspect should he find that by the employment of some other means of closing the vessels secondary hæmorrhage followed.

Secondary hæmorrhage following, with equal frequency, the use of any other method of closing vessels would be considered sufficient ground for its rejection. Doubtless it is for this reason that many of the methods which have been presented to the Profession for trial have failed to sustain themselves as reliable methods, and it is probable that many or most of them were worthy of a better fate than that which befell them. Acupressure and torsion can scarcely meet with the same fate, and they will probably be supported, notwithstanding the objections to them, whether better means are offered or not.

We have now learned that it requires but very little force to effect the closure of arteries. The satisfactory results sometimes obtained by the use of acupressure and torsion have taught us that the perfect occlusion of arteries may be effected by a much less degree of force than was formerly supposed to be necessary.

In view of these considerations it seems unreasonable to cling

to the ligature with prejudiced tenacity; and those objections which are common to the ligature, and other methods also, ought not to be used exclusively to suppress the claims of the rival method, but ought also to be placed to the account of the ligature.

The peculiar effect of the *artery constrictor* upon the coats of the artery—rupturing and invaginating the internal and middle coats, while it preserves the integrity of the external coat—appears to offer a more substantial ground for confidence than any method based merely upon pressure or an internal coagulum. This, added to the fact that the instrument is instantly withdrawn from the vessel, seems to offer all the advantages which can be expected of any method.

The advantage which the artery constrictor offers for fulfilling the indications necessary for the union of wounds by the first intention, will be seen when it is noticed that absolutely nothing is left in the wound to act as a foreign body; although probably the same apparent objection will be raised against the artery constrictor which has been offered against the operation of torsion—viz., that the bruised end of the artery acts as a foreign substance in the wound, and must be removed by suppuration.

It seems to me that those who have raised this objection to the use of torsion must have had very little practical experience with it, or else have performed the operation very carelessly or imperfectly. From my own observation of the effects of torsion, and from a considerable experience in the crushing of tissues by the écraseur, I have concluded that the effect of torsion, or of crushing the extremity of the artery, even to a considerable extent, provided it be done rapidly, is not incompatible with the union of wounds by the first intention. In order for the crushed portion of an artery, or other tissues left in a wound, to become a slough, or to act as a foreign body, it is necessary that the pressure should be continued until sloughing or inflammation begins, or else that the portion crushed be separated from contact with other living tissues, and exposed to

the influence of atmospheric air or other deleterious influences, as inflammation, etc.

None of these conditions are present in the case of operations as usually performed, for the wound is brought together immediately, and any lost vitality is restored by the close contact with the living tissues and the blood. Besides, the greatest pressure made by the artery constrictor is not sufficient to injure the external coat of the vessel. The moment the internal and middle coats give way, the pressure upon the external coat is very slight, on account of the groove in the tongue of the instrument, made on purpose to receive the external coat and protect it from injury. Therefore this objection to the operation of torsion, even if it held good, could not be raised against the artery constrictor.

This leads me to mention one of the chief advantages of the artery constrictor over the ligature and acupressure—viz., that provision which it promises for the prevention of secondary hæmorrhage. When the ligature is used a sinus is formed along the track of the ligature, leading directly to the end of the vessel; and in case of accident to the artery from a too speedy separation of the ligature, or from a failure of the internal coagulum to form, or other cause producing secondary hæmorrhage, the blood finds a free and tempting outlet through the sinus or opening thus provided.

So also with acupressure, the needle being left in the wound acts temporarily as a foreign body, and also creates a sinus leading to the artery; and in case of the failure of the internal coagulum to form, or on account of the breaking down of the clot from a granular degeneration, or in case of a failure of the wound to unite by the first intention, there is always more or less danger of secondary hæmorrhage following the withdrawal of the needles when any of the above circumstances occur.

With the artery constrictor, on the contrary, hæmorrhage is rendered impossible, under any of these conditions, from the fact that the invagination of the internal and middle coats forms a valve-like projection in the interior of the vessel, which

is of itself sufficient to protect the artery from hæmorrhage.

I desire now to present the artery constrictor to the Profession for trial. I am confident that some such method will eventually displace the ligature; if this be not the method, it must be acknowledged that the principles upon which it is based are those which must finally succeed. It may be that the experiments which I have thus far been able to make upon the living human arteries of large size are not sufficient to inspire those not interested in the success of the instrument with confidence enough to employ it in capital operations. I trust, however, that any necessary proof of its merits may soon be forthcoming. To my own mind the experiments upon the arteries of the horse have covered the whole ground, the first operation proving the possibility of rupturing the internal and middle coats of the artery without injuring the external coat; the second operation proving the possibility of closing a very large artery, in section, without leaving any substance attached to the artery or in the wound. All the other questions connected with the occlusion of arteries have been proved over and over again by the advocates of other methods and pathological investigations.

In the meantime there can be no objections to the use of the instrument in a multitude of cases where the arteries are not of large size, and where there is never any danger in the use of even the most crude efforts to arrest hæmorrhage.

The artery constrictor will often be found useful to control the bleeding in amputation of the breast, and in other operations where it is desirable to secure union by the first intention, and yet where the arteries are not of such a size as to create any fear of failure.

If the surgeon has not sufficient confidence in the instrument for this, then I may venture to recommend it as an aid to the performance of operations in general, where it is desirable to keep the wound free from blood after the first incision is made, and yet where the ligature or acupressure needle would be in the way of the operator, and also require subsequent removal.

In such cases there can be no danger, and often a great advantage gained by applying the constrictor to the arteries as fast as they are cut; the operation may then go on with one of the most disagreeable accompaniments of larger operations overcome, that is, the presence of blood in the wound. For this purpose a small pocket-case constrictor is to be used. In such instances it may supply the place of torsion, than which it is more easily and effectually applied.

The artery constrictor offers encouragement for its trial in operations to produce the occlusion of arteries in cases of aneurism. In this use the constrictor is to be applied to the artery in its continuity, the internal and middle coats being ruptured and invaginated on either side of the instrument, and the external coat is left as a connecting band to the vessel, preserving its continuity.

The great advantage to be gained in the use of the constrictor in aneurism being the possibility of obtaining union by the first intention, the wound being brought together immediately after the operation, and as the constrictor is always to be withdrawn as soon as it has made its impression upon the artery, there is nothing left around the artery or in the wound to act as a foreign body.

The artery constrictor may be found useful also in cutting off the vascular supply of large tumors, in which case it should be applied in the continuity of the vessels in the same manner as directed for aneurism.

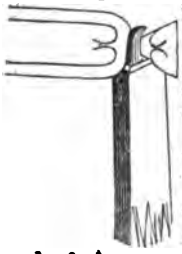
In the operation of ovariotomy it is very desirable to have some simple means of arresting the flow of blood from the small vessels which are opened during the breaking up of adhesions, etc. Inasmuch as the constrictor acts equally as well upon small as upon large arteries, the same advantage may be gained by its use in this operation as in those already mentioned, the abdomen being left free from ligature or other foreign substances usually found necessary.

In the application of the constrictor for the closure of large vessels after amputation, etc., there need be no fears entertained

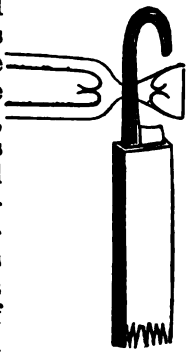
of immediate hæmorrhage, because the usual pressure which is made upon the artery above the points of operation (by the tourniquet or otherwise) is always sufficient to arrest the flow of blood into the extremity of the artery and cause the formation of a clot. This pressure is usually made for safety and convenience' sake; but should it be made designedly for the object of obtaining a clot in the artery, of course the effect would be more perfect.

DIRECTIONS FOR THE APPLICATION OF THE ARTERY CONSTRICTOR.*

The application of the constrictor is very simple. The artery is to be caught up by a tenaculum or a pair of forceps (which answers better), and the tongue of the constrictor placed around the vessel; the tongue is then drawn tightly upon the artery, by means of the vice arrangement at the upper end of the instrument. As soon as the screw turns with a considerable degree of resistance, or the internal and middle coats are seen to be invaginated, by noticing their movement in the end of the artery, the instrument is to be detached from the artery, and the operation is completed.



In large arteries the tongue of the constrictor must be drawn into the sheath further than is necessary for small arteries. This is the one point which it is necessary to attend to in the closure of large arteries; there can be no harm done to the vessel by being drawn well into the tube, and a thorough invagination secured. The invagination of the internal and middle coats may be made as thorough as it is desired by drawing the artery into the tube as far as needed to effect the object. Some of the instruments have been made with stops, to indicate when a proper invagination was reached; but by further experience it was found that the touch was the best guide for the operator. By a continued traction upon the external coat of an artery, after the invagination is once commenced, the internal and middle coats may be peeled up and pushed entirely out of the external coat, and this latter coat be drawn out through the sheath, entirely freed from its inner coat, so that the operator has it in his power to produce an invagination to any desired extent.



* See cuts 6, 8, and 9.

It is well always to permit the blood to flow into the artery (if it has been controlled by tourniquet or otherwise during the operation) before removing the constrictor; this secures a perfect clot upon the invaginated coats, which can hardly be displaced afterwards.

For convenience the constrictor may be made with three sizes of tongues, to be used with one tube, so as to be useful in any sized artery.

A pocket-case constrictor is also made to be used as a substitute for the torsion forceps, than which it is more easily and effectually applied.—*Medical Record.*

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Art. II.—On the Corrective Influence of Bromide of Potassium on Opium. By J. M. Da Costa, M. D., Physician to the Pennsylvania Hospital, etc.

In an article in this journal for April, 1870, p. 365, I called attention to the influence bromide of potassium exerts on the unpleasant effects produced by opium. I propose here to give some cases which led me to form this opinion, and to examine more particularly into the combined action of these valuable agents.

The first case in which I fairly studied the subject was under my charge about two years ago. A lady affected with a most painful enteric malady, and of very susceptible nervous system, was often attacked with seizures of abdominal pain of most serious character. Yet she generally bore them until they exhausted themseves without taking any remedy, or with such slight help as remedies, excepting opium, afforded, rather than subject herself to the distress this medicine caused. It was not fancy on her part; for when at times, on account of the excruciating character of the pain, she was obliged to resort to opium—usually black drop, which, of all preparations, produced the least disturbance—I have stood by her bedside and witnessed the effects of the anodyne. There was relief, cer-

tainly, of the abdominal distress, but also itching or tingling sensations all over the body, amounting to positive pain; then numbness more or less extended, usually accompanied by a sense of sinking, and a faintness most severe and constant, and uninfluenced, or with difficulty relieved by stimulants. Complete unconsciousness did not occur, or only existed for a minute or two, when she thought she slept, though a slight movement instantly aroused her; but, to use her own expression, she was "alive nowhere except the head and heart." Perhaps the best statement of the result from giving the bromide is afforded by still further quoting my observant and accomplished patient in an extract from a note from her: "I have been sending my thoughts back to the time when opium was my horror, and severe pain as easy to bear as its effects. If the pain was relieved, the faintness would return after twelve, fifteen, or twenty-four hours from the time of taking the opium. Now, on taking twenty grains of the bromide one-half hour before a dose of the watery extract, and again about two hours afterwards, I am pretty secure." From the first time in which, when giving her the bromide, its influence in preventing the unpleasant consequences of opium was noticed until the present, bromide has not failed us once. On morphia it has least influence, and morphia and codeia always affected her the worst. Still it has an influence, and four doses keep her tolerably comfortable.

A case as striking, though not one in which the observation has been as often repeated, is that of an old lady subject to attacks of diarrhœa, and in whom all opiates, even paregoric, produced faintness, marked, though not so marked as in the preceding instance, but more decided headache and nausea. By taking forty grains of bromide, in twenty-grain doses, beginning about three hours before she takes opium, she bears perfectly well twenty-five drops of laudanum.

Of another case I transcribe the record, as kindly kept for me at the hospital by my resident physician, Dr. James C. Wilson. It reads thus:

Annie C., Irish, aged thirty-five, a domestic, widow. Admitted into the Pennsylvania Hospital February 8, 1871, suffering with anæmia and with impaired digestion, which however, is not associated with any manifest organic disease; was placed upon tinct. ferri chloridi gtt., xx., t. d., and good diet.

*February 12th.*—Complains of sleeplessness; states that she was awake all last night. This report was corroborated by the night nurse. Was ordered liq. morphiæ sulph., f℥ij. at bedtime.

13*th.*—Passed a sleepless night. After taking the morphia she experienced a feeling of great weakness; felt dizzy and confused; described herself as "seeing all kinds of strange things." She had headache as these phenomena passed away, with dryness of the throat and great restlessness, which lasted until morning. On rising she had intense nausea and vomiting, which continued until noon. 2 P. M., given potassii bromid., grs., xxx. 8 P. M., liq. morphiæ sulph., f℥ij., as last night. Pulse, 128; respiration, 28; temperature, 100°.

14*th, A. M.*—Pulse, 108; respiration, 24; temperature, 98¼°. States that she slept very well, and feels in every respect quite as well as usual. No dizziness nor headache; no nausea or vomiting followed the administration of the morphia.

17*th, P. M.*—Pulse, 116; respiration, 20; temperature, 99½°.

18*th A. M.*—Pulse, 96; respiration, 29; temperature, 98¼°. Had taken no medicine, except the tinct. of chloride of iron, since the evening of the 13th instant. She again complains of sleeping poorly. Last night she did not fall asleep until towards morning. 8 P. M., given tinct. opii deodorat., gtt., xxv. Pulse, 83; respiration, 20; temperature, 99°.

19*th A. M.*—Pulse, 76; respiration, 20; temperature, 99°. She states that after taking the medicine last night she felt weak and faint, was dizzy, and fancied that she saw curious and grotesque objects; had no pain in her head, but was restless, and had no sound sleep, although she dozed at times. Had a feeling of faintness and nausea on rising, but no vomiting.

6 P. M., took potassii bromid., grs., xxx.; 9 P. M., tinct. opii deodorat., gtt., xxv.

20*th*.—Fell asleep about midnight, and slept well till morning. Had some dizziness, but no feeling of faintness; no confusion or headache after taking the opiate. Had no nausea, vomiting, or faintness on rising.

I will briefly cite one more case, which was very recently under my observation.

A young lady, in whom opium produced a most decided faintness and nausea, was attacked with muscular rheumatism, and took laudanum at night to relieve her discomfort. She sent for me the next morning, and I found her with dry throat, giddy, and weak. Prescribing the bromides, partly to counteract the effect of the opium, partly for other reasons, she was enabled to take the opiate without the least inconvenience; and, when a few days afterwards I found that she had been resorting with impunity to an opiate of either Dover's powder or laudanum, every night, I ascertained that, by a misunderstanding of orders, she had continued to take the bromide mixture, in addition to the prescription of acetate of potassa and colchicum, which I had directed to replace it.

I might continue to multiply this narrative of cases, but it will not make the subject any clearer. I shall rather investigate the result, in some special directions, of giving the two remedies. The bromide does not destroy either the anodyne or the hypnotic effects of the opiate; on the contrary, it rather heightens both, and more particularly the latter. To quote again from the letter of my first patient: "The more bromide I take the sooner do I get sleep after a dose of opium. Two doses of bromide (twenty grains each) are not usually enough to counteract the exciting effects, and to procure sleep under five or six hours from the time of taking." The faintness from opium is the phenomenon most markedly prevented; next in the readiness of being influenced stand the headache, vertigo, and nausea, then the itching of the surface, and dry mouth.

The bromide has seemed to me to act best when it is given

some hours before the opium, and forty to sixty grains—generally forty grains—prove sufficient. But it also has an action, sometimes, however, markedly less, when combined with opium; and, should unpleasant consequences have accrued from this, the bromide will mitigate their severity. Even the cutaneous itching is favorably influenced, and I have known repeated doses most decidedly affect the faintness. When morphia is used hypodermically, it is then most necessary to give the bromide some time in advance, and it may take larger doses to accomplish the purpose. At least it has so seemed to me, though I have not often tested this, since most of the observations were made in persons who took opium by the mouth.

Now, though I think that the corrective influence of the bromide on opium holds good as a general truth, we meet at times with exceptions. Dr. Wallace, to whom I had mentioned the matter, told me that while he had in several instances obtained the most gratifying results, he had failed in one; and Dr. James C. Wilson has taken notes for me of a patient in the Pennsylvania Hospital suffering from advanced phthisis, in whom sleeplessness, a feeling of confusion, dizziness, and dull throbbing, frontal headache, and nausea and vomiting in the morning were caused by one drachm of the solution of sulphate of morphia. The addition of the same amount of spirits of chloroform obviated the unpleasant results, though it finally failed; and sixty grains of the bromide did not prevent one-fourth of a grain from producing the disagreeable consequences.

But these exceptions are not, I believe, numerous, and the bromide does not often disappoint. Of course, in investigating its value with reference to the questions here discussed, we have to test it on those with whom opium really disagrees, and not on such who merely say that it does; for, from some reason or the other, many persons seem to think it a point of honor to make this statement, though out of ten such persons nine are quite certain to be able to bear the anodyne as readily, and to derive as much advantage from it as the rest of mankind with whom it professedly does not disagree. Yet, considering the

number of therapeutical applications of the invaluable drug, and the fact that we may be prevented from using it in instances in which its employment might be of the greatest moment, because to use it seems impossible, it will be of service to be able to control its action, and the remarks here made will, I trust, prove to represent the full truth. Moreover, they may be looked upon as a contribution towards a most interesting and comparatively neglected part of therapeutics, what may be called the *corrective influence* of one drug over the other; corrective in obviating its bad results, while not interfering with, but rather heightening the good ones.—*American Journal Medical Sciences.*

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ART. III.—REMARKS OF R. R. McILVAINE, M. D., formerly of Cincinnati, before the Ohio State Medical Society, 1871, on the Special Report of the Committee on Sanitary Science. Reported by J. W. HADLOCK, M. D.

Mr. President,—I wish to inquire of our colleague if I understood him, in his able and elaborate paper, that there was a deterioration of the American people, and the feminine portion in particular? [The Doctor was proceeding to discuss the question just raised by Dr. Black in his paper, when he was called on by many voices from various parts of the house, to take the platform, that all might hear more distinctly what he had to say. In taking the stand, he remarked that as time was precious, his remarks would be characterized by great brevity.] In the first place, the gratuitous assertion that the beauty of the American women is short-lived, and that before they have scarcely attained their majority, like the early cloud or morning dew, passes away, is a proposition incapable of demonstration.

I have had, Mr. President, the opportunity of seeing women in various places and under varied circumstances. I have not seen them at the receptions of Napoleon, nor those of Victoria,

though I have met with persons who attended both. Now, let us begin by illustration; and we will give the late Mrs. Madison as a sample of the olden-time women. At her advanced age had she many peers? and we leave the history of her time to answer whether she had any superiors. We give her, then, as the type of a class; and we are happy to say that the class of which she was the representative is not extinct, but will assert, without fear of successful contradiction, that there are among the women of Ohio to-day representatives of every decade from that of womanhood to the octogenarian that will compare in point of proportion, which is the foundation of beauty, with the same number of women in this or any other country.

Now, Mr. President, as to the proofs that we are not deteriorating. In 1850, if I remember rightly, in every 2,178 of the entire population of the United States, there was one over 90 years of age, and in every 25,000, in round numbers, there was one over 100 years of age. Mr. President, it is not I who speak, it is history. It is the bible of politics and progress, the census of the United States for 1850, that I credit with these facts.

But further, Mr. President, the State of New York in 1860 had a white population of 3,831,500; of this number there were 1,646 persons over 90 years of age—namely: 704 men, and 942 women; thus, in every 2,327 there was one over 90, and in every 41,647 there was one over 100 years; in both cases women being in the majority.

Mr. President, we will next call your attention to the State of Ohio. In 1860, with a white population of 2,302,808, there were over 90 years of age 760; of this number there were 366 men, and 394 women, and therefore there was in every 3,030 one over 90 years of age, and in every 33,864 one over 100 years of age. In this case, as in that of New York, aged women are in the majority.

Again, Mr. President, we will direct your attention to Old Virginia. In 1860, with a white population of 1,047,299, there

were 245 men and 296 women over 90 years of age (total, 541), which gives one over 90 in every 1,935, and in every 15,178 there was one over 100 in her entire white population.

And further, Mr. President, we shall cite a more northern latitude. In 1860 the white population of the State of Vermont was 314,369. In this small population there is evidence of vitality; there were over 90 years of age 146 men, and 180 women, and here, as in all the States named, women have the majority. In every 961 there was one over 90, and over 100, 13, being one in every 24,182 of her entire population.

Here, Mr. President, we have given a tabulated view of each section, east, west, north, and south, and we think it proves conclusively that we are not deteriorating.

Now, Mr. President, the entire white population in 1860 of the United States was 26,690,206. Of this number one in every 2,775 and a fraction was over 90 years of age. Of this population there were 902 over 100 years of age, making one in every 29,578 and a fraction. These figures, Mr. President, speak for themselves, and we pass to inquire whether man in the aggregate has been deteriorating. It was intimated that in the hotter climates, as in India, that the population have to be recruited from more temperate regions. That the capacity of the white man—who is the emigrating man—for self-sustaining and reproducing in all regions, is a question I think history has settled. Emigration is not peculiar to our day, nor are discoveries. Pharo Necho, 616 years before our era, sent out an expedition on a voyage of discovery, which was successful in its mission. Bartholomew Diaz, in 1485 of the Christian era, discovered the Cape of Good Hope, which Pharo Necho's men had discovered 2,101 years before. Barnatz, a Holland navigator, in 1596, discovered the Island of Spitzbergen, the most northerly land on the globe, so far as we know, in the Arctic regions, in latitude 80° 48′. But this is not all; the descendants of these same Hollanders founded a colony at the Cape of Good Hope in 1650, which, so far as known, remains to the present time. This is in latitude 34° 30′ south.

Now, Mr. President, another subject has been touched upon, and authorities have been cited. You are aware, sir, that authority is not always truth, but truth is always authority. The agitation of this subject is not of yesterday, it carries us to the past. I mean, sir, this subject, which has been so severely censured in his paper by our colleague—namely, the marriage of relatives. This is a subject that the Popes claimed at an early day to regulate by their authority. Thus Gregory the First, A. D., 598, pronounced marriages unlawful as far as the seventh degree of collateral consanguinity, computed from the common stock. Pope Innocent the Third, in 1198, in the plenitude of his power, claimed that he had a right to dispense with the law; hence the Lateran Council, in 1215, passed a remedy for those disabilities, and permitted marriages after the fourth degree, or what we call third cousins. It may be assumed that these things were done by the Popes to be as unlike Judaism as possible. From 325 of the Christian era, on the 19th of June, when the first Nicene Council met, from that time it was the well-defined policy of those unsanctified wretches calling themselves Christians, to prosecute the Jews, century by century, till 1790, when a new era dawned. The Jew, under the benign influence of the French revolution, found himself recognized as a man.

Now, Mr. President, we are brought face to face with facts against fancy, and demonstrations in opposition to assertion. That science should have its romance as well as literature, is not to be thought strange. For years we have been told by those who profess to guide us that the source of all our disasters, social and physical, was the intermarriage of relations. We have stated that the Jew found himself a man since 1790. To-day they are socially, morally, intellectually, politically, and pecuniarily, stronger than they have been at any period since the year 70, when, on the 10th of July, the Roman General destroyed their temple and blotted them out as a nation. Now let us inquire into their origin, and this demands of us to go east to Mesopotamia. There, 1998 years before our era, the father

of the Jewish nation, Abraham, was born. In due time he married his half-sister. The issue of this marriage was a son, but on this son there was no outer and visible sign of imperfect organization. In due time this son, Isaac, married his first cousin, Rebecca, and from this union sprang two sons, Jacob and Esau, the former in due time marrying his two cousins. He, Jacob, the "New England Yankee of the Bible," became a trader, and his ability to acquire property is historical, and the standing type of his race to this day.

But we will not fatigue you with their history—all can read it who choose. We pass now to the unduplicated man of history, Moses, who was born 1571 years before our era. Was his mother a Greek, and his father from the banks of the Tigris? No! His father, Amram, married his own aunt, his father's sister. Was Moses deaf? or was he idiotic? or was his brother Aaron a sufferer from mental incompetency; or have the descendants of the Jews to our day been distinguished by those diseases which are said to be the results of intermarriages? This we emphatically deny, and with all these facts before us, with nearly 2,000 years of oppression from a dominant religion, by their abhorrence to the great fundamental principle of the Mosaic faith, they have triumphed over all disabilities; hence we may conclude, in the language of one of their own prophets, "That Judah yet ruleth with God."

The Doctor made the above remarks impromptu, and had to draw on his memory for the dates given, and he stated that if any mistakes occurred in data, he stood ready to be corrected.

## ANALYTICAL DEPARTMENT.

**"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.**

ART. I.—ANALYSIS OF VARIOUS ARTICLES. Published in the "Medical Times and Gazette," the "British Medical Journal," and the "London Lancet," etc. (Original copies). By Prof. JAMES M. HOLLOWAY, M. D.

*Rapid Cure of Aneurism by Pressure.*—In the "Dublin

Quarterly Journal," August, 1871, brief notice is made of the dissection of Dr. William Murray's case of aneurism of the abdominal aorta treated successfully by the horse-shoe tourniquet six years before. The man died from another aneurism of the aorta at a point corresponding to the cœliac axis that formed rapidly after the patient was compelled to resume his vocation of pavior.

The dissection showed the aorta below the inferior mesenteric artery reduced to an impervious cord, the collateral circulation having been carried on for six years through the intercostals and the inferior mesenteric, which latter was very much enlarged.

Dr. Murray holds that his case establishes the following propositions:

1st. The possibility of suddenly blocking up the aorta below the renal arteries without injury to the patient.

2d. It reveals the channels by which blood finds its way to the lower part of the body, when the aorta is thus occluded.

3d. It shows the vast importance of giving chloroform in using pressure for the cure of aneurisms; and

4th. It proves that aneurism can be cured in a few hours by coagulation of blood, while the old method, which cured the disease by fibrinous lamination, lasted, on an average, five and twenty days.

Three days after the first attempts, which proved ineffectual, the patient was chloroformed, and a horse-shoe tourniquet was applied to the artery above the tumor for five hours continually the pulsation being completely arrested. It was only in the last hour that any appreciable change took place in the tumor. In the evening of the same days the very slight pulsation observed in the tumor after removal of the tourniquet ceased entirely, and never returned.

*Bromide of Sodium as a Substitute for Bromide of Potassium.*—Because of its more easy elimination it has been found that the former of these two medicines can be given in much

larger doses than the latter. The one is a perfect substitute for the other in the treatment of epilepsy, chorea, etc. The bromide of sodium, in large doses, frequently causes thirst and constipation, while the potassium is apt to produce colic and diarrhœa.

*Glycerine as a Vehicle for Chloroform.*—Dr. W. Murdock, New York, dissolves one part by volume of chloroform in three of glycerine. The solution is clear, bland, and has very little odor; can readily be diluted with water without disturbing the solution. Formula: Six ounces of glycerine and two ounces of chloroform. Make seven ounces of the solution—seventeen minims of chloroform in one fluid drachm.

*Solution of Santonin.*—Dr. J. Harley recommends the following formula:

℞.—Santonin, grains, xii.;
Sodæ Bicarb., grains, xx.;
Aquæ Distill., ℥iii.

Add the santonin to the boiling alkaline solution, and reduce by heat to two drachms. If desired, neutralize with acetic acid.

*Phosphate of Lime (Hydrate) in Sickness of Pregnancy.*—Dr. Metcalf Johnson, in the July No. of the "Lancet," states that he has derived great benefit from the employment of the phosphate of lime in nausea and vomitings of pregnancy. After administering the remedy in various ways, he gives preference to the hydrated phosphate of lime in doses of three to ten grains three times a day, suspended in water and flavored to suit the taste of the patient.

*Ammonia in Snake-Bite.*—The following appears in the "Medical Times and Gazette" for July 1, 1871:

"We are glad to be able to again record the success of Prof. Halford's treatment of snake-bite by injection of ammonia into the veins. In Tasmania, a woman, having been bitten six hours previously, was insensible, cold, and apparently sinking. Dr. Appleyard injected thirty drops of liq. ammoniæ, B. P., sp. gr.

959, into a vein of the arm. The effect was magical—she roused up directly, and very soon afterwards was perfectly recovered. Again, a man was bitten the other day at Schnapper Point, and when the Doctor arrived, one hour and a half after the bite, the man was perfectly insensible, the limbs paralyzed, the pupils of the eyes dilated, the countenance dusky, and the skin covered with a profuse clammy perspiration. Within twenty seconds of Dr. Dimock injecting the ammonia into a vein of the arm, the man jumped suddenly up, as if electrified, and stared about him; his pupils began to act, and his skin to get warm, and in two hours he was removed home. Dr. Dimock has since expressed himself as follows: "I have no hesitation in saying that the preservation of this man's life was entirely owing to the ammoniacal injection."

*The Modifications Produced on the Temperature of the Body by the Local Application of Cold and Heat.*—Before the Royal Medical and Chirurgical Society of London, Dr. B. F. Mennely presented a paper on the subject named above, from which the following conclusions are drawn:

"1. That immersion of one extremity in iced water did not cause any alteration in the temperature of the other extremities or the body generally, unless the subject of experiment was in a state of more or less nervous exhaustion, or there was decided coolness of the surrounding air, when a fall of temperature occurred.

"2. That a slight rise of temperature in the body generally, and a more considerable one in the extremities, followed immersion of a hand or foot in water hotter than the blood, amounting under the tongue to about 1° F., and in the extremities from 1° to 3° F., above the normal standard.

"3. And that if at this time any one of the extremities was put into cold water, a fall of temperature below the normal, slightly marked in the body generally, and much more so in the extremities, very shortly commenced. If the hand or foot was now withdrawn from the water, reaction became established, and the natural temperature was slowly attained."

Such results would appear to show that, for cold to act locally, a disturbance of the conditions which maintain the normal balance of temperature is necessary first of all—such as is caused by undue heat; and suggest the idea that these variations of temperature may be regarded, in many respects, as parallel to those attending a slight rigor, and that they are not always the result of reflex agency.

## CLINICAL RECORDS.

**"Ex principiis, nascitur probabilitas: ex factis, vero veritas."**

LESSONS FROM THE MEDICAL CLINIC AT THE "HOPITAL DE LA CHARITÉ," given by S. JACCOUD, Assistant Professor to the Faculty of Medicine at Paris; Physician to the Hospital St. Louis; Chevalier of the Legion of Honor; Corresponding Member of the Royal Academy of Science of Lisbon, and of the Medical Societies of Berlin, Vienna, Wurzburg, etc. Containing twenty-nine wood cuts and eleven chromo-lithographs. [Translated by Dr. J. D. JACKSON, of Danville, Ky.]

### SIXTEENTH LECTURE—PROGRESSIVE NERVOUS ATROPHY.

(CONTINUED.)

Diagnosis of the Lesion—Forms of Atrophy of the Nerves—Mechanical Atrophy—Atrophy by Inertia—Spontaneous Atrophy—Anatomical Characteristics of the Lesion—Examples of the Diverse Forms—The Relations between Atrophy of the Nerves and Neuritis.

Progressive Nervous Atrophy---The Relations between this Morbid Form and the Ascending Paralysis of Landry; with the Ascending Paralysis of Duchenne; with the Ascending Neuritis of Duménil---Concerning the Naming of this Progressive Paralysis.

Results of Atrophy.

In a clinical point of view, this form of invading paralysis has been pointed out by Ollivier, of Angers, who has described it well, but without entering upon any of the anatomical, physiological, and pathogenetic questions which appertain to it.

The illustrious Graves, of Dublin, has devoted a special ar-

ticle to peripheric paralysis; in support of his clinical observation, it shows that the accidents originate by the extremities of the nerves of the lower limbs, and that they extend thence, mounting up, inducing more or less promptly, a state of complete powerlessness; according to this contribution, one would believe that these facts ought to come nearer the case which we have studied, but I cannot, for my part, come to such a conclusion; an analysis of the symptoms is insufficient; we do not at all know what was the state of nutrition of the muscles in the patients of Graves, the reflex movements, and the elastic contractility, and in the absence of this knowledge, the facts described by the clinical teacher of Dublin lose all foreign signification; furthermore, the paralysis originated in the lower limbs, a new reason in opposition to all similitude between the case of Graves and our own.

Since then Duchenne has described, under the name of general spinal paralysis, a paralysis the distinctive characteristics of which he has specified with a rare precision; the progressive tendency, the previous atrophy of the paralyzed muscles, loss of electrical contractility, all is indicated, only the loss of reflex motility has not been shown. Clinically, the cases of Duchenne are like ours, and you can, without fear of error, approximate these facts, the one with the other. But this eminent observer has localized this form of paralysis in the marrow; an interpretation very different from ours, and which ought to be examined. In the last edition of his work, Duchenne invoked in aid of this localization three facts, which have not really a similar signification. In two of these facts (obs. xxxv. and xxxviij.) the autopsy has shown the complete integrity of the marrow, and the spinal nerves were only examined at their roots; in good logic, these two cases ought to be left aside, they rather plead against the opinion of the author, the absence of lesions of the spinal marrow. In the third case (ob. xxxvij.) there has been established a softening of the anterior cords of the marrow in the cervical region; but this observation, gentlemen, does not appertain to the group of facts which we are studying; the pa-

ralysis affects the superior members as well as the inferior, because the lesion of the marrow is seated higher up; this case is simply an example of very extensive paraplegia, with eschars, and the involuntary passage of stools and urine; this is the classical softening of the marrow, with proportional paralysis to the height of the lesion; there is not here the characteristic dissemination of the phenomena of akinesia; the paralyzed members were affected in their entirety; finally the muscles were atrophied, and lost their electrical contractility; it is very simple, since the marrow was disorganized on a level with the lesion, but these symptoms were rather slower than in progressive disseminated paralysis properly so called. To resume, this observation is an example of a common lesion of the spinal marrow; the two other cases do not justify the location in this organ of the paralysis clinically described and individualized; consequently although the description which Duchenne has given of his morbid form is exact, and taken from nature, yet the interpretation which he has given by the diminution of general spinal paralysis is hypothetical, and has but little foundation. I would say that I only draw the elements of this discussion from the facts of the author himself, but would recall the fact, that the clinical characteristics of this paralysis are physiologically irreconcilable with the localization in the marrow. Retain, then, simply from all this that the two facts reported by Duchenne are two very clear examples of the disease which we have ourselves observed, but that the qualification of general spinal paralysis is not justified.

In 1859 our lamented confrere, Landry, published under the title of *Acute Ascending Paralysis** a case which, despite certain clinical differences, ought to be, I think, approximated to the case which we are studying. In a man forty-five years of age, who was the subject of this observation, the paralysis falling especially upon the motility, presented the characteristic

* Landry, Note sur la paralysie ascendante aiguë (Gaz. hebdom, 1869. This case was observed in the service of Gubler, who joined to the work of Landry interesting reflections.

dissemination and extension; it is true, that it is expressly said that the muscles were not atrophied, and that they preserved their electrical excitability, but the patient died in eight days, and whatever may have been the rapidity with which the atrophy of the muscles and the diminution of their contractility in the paralysis of the spinal nerves may have produced, it is very clear that in this case the disease did not remain a very long time before the symptoms manifested themselves. The autopsy, completed by a microscopical examination, showed that the marrow and the roots of the nerves were in a state of perfect integrity, but the nerve cords and their terminal branches were not examined. The absence of lesion in the marrow justifies the connection which I would establish between the case of Landry and our own.

I have said to you many times, and I intentionally insist upon this point of diagnosis, that in this form of progressive paralysis, analysis and an appreciation of the symptoms demonstrated the localization of the accidents in the spinal nerves; this pathogenetic relation is rigorous in the case of our patient, so that I will not hesitate an instant to formulate the conclusion, although science does not possess a single confirmative autopsy; I repeat it again to you; a disseminated paralysis, which, in the space of from eight to twelve days, alters the nutrition of the muscles, diminishes the electrical contractility, and abolishes the reflex movements at the same time that it does the voluntary, such a paralysis, I say, cannot be localized otherwise than in the spinal nerves; for the marrow to produce such phenomena, it is necessary that a disorganization of tissue should take place, and still the accidents would not be so precocious; now such a disorganization is inadmissible in the case indicated, in view of the dissemination of the symptoms. This localization, which imposes the simple interpretation of clinical characters, is to a degree so certain, so necessary, that it can pass from anatomico-pathological control. I am delighted, however, that this proof is not totally defective; it has been furnished by Dr. Duménil, surgeon-in-chief of the Hotel Dieu of

Rome.* Regarding the two facts which he has chronicled in his remarkable work, there is one among others, the history of which he has completed by the most minute of autopsies, and which categorically demonstrated spontaneous atrophy, progressive, and disseminated throughout the spinal nerves. I cannot here enter into the details of the microscopic examination, but must earnestly recommend you to the reading of the original memoir; it is at present sufficient that you should know that the plantar nerves, the right posterior tibial, the sciatic and internal popliteal sensibly diminished in volume, only presented some scarcely recognizable tubes; the mass was formed by a very abundant laminated tissue, in the midst of which there was found a great quantity of molecular granulations. At other points, pale, nervous tubes were demonstrated, commingled with a great quantity of brilliant granulations and fatty globules; but there were not seen, either axes or distinct medullary substance. Laminar degeneration, lamino-fatty degeneration, such have been definitely, the constant lesions upon the two nerves which have been examined. There existed besides, note the fact well, a disseminated atrophy of the nervous roots, especially in the cervical and dorsal region; and a certain number of altered roots presented a granulo-fatty degeneration, exactly like unto that of the sciatic nerve and internal popliteal.

As to the symptoms presented by patient (a woman of thirty-six years), they offered a remarkable identity with these we have before us, but they were progressive, with a mildness truly exceptional; it was in the course of the sixth year that the paralyses became mortal. Judging the state of our man at the end of the eighth or ninth week of the disease, we are very certain that the disease will leave him no respite.

Duménil proposed the qualification of *ascending neuritis* for the important observation which I am going to speak to you of;

* Duménil, Contributions pour series à historie des paralysies périphériques et specialement de la nervite. Gaz. hebdom, 1866.) Already in 1864 (Eadem loco) the author was cognizant of a case which enters into the same category, and in which the microscopical researches demonstrated the existence of alterations in peripheral nerves.

in this particular case the inflammatory origin of the atrophic process is indeed beyond doubt, and the name of neuritis is justly applied; but for reasons which I have previously revealed to you, I would not adopt a generic denomination from this form of paralysis; that which would be constantly true under such circumstances, is atrophy of the nerves; I prefer, then, the designation nervous atrophy, which prejudging nothing as to the origin of the morbid work, will always be legitimate. As to the epithet ascending, which has served Landry and Duménil, I have for rejecting it a weighty reason, which I will give you.

I said to you in a preceding conference that the symptoms of this paralysis are equally compatible with a lesion of the terminal branches, and with that of the roots; consequently the epithet ascending is faulty in being exclusive, and in leaving out from it those cases where the paralysis would be due to a disseminated lesion of the nerve roots. My reservation, you will note, is not hypothetical; in Duménil's case the alteration of terminal branches of the nerves coïncides with the like lesions of the roots, and even of the marrow. The author, by a rigorous analysis, which I am not permitted to discuss, has established the fact, that these last alterations were consecutive to those of the terminal branches, that the lesion, in its entirety, had marched from below to above, and that the qualification of ascending was by that justified. Nothing is more legitimate for this particular case; but we, who are studying this morbid form in general, are not able to give it a restrictive qualification, which would be opposed by ulterior observation. Suppose that in this patient of Duménil there had also been a lesion of the roots of the nerves, or rather admit that the anatomical analysis had positively demonstrated that atrophy of the terminal branches was consecutive to that of the roots, the clinical phenomena had been exactly the same. That which characterizes this paralysis, that which gives it a distinct and special form, is the lesion of the spinal roots in a region where the seprated filaments can be separately altered; but the dissemination

of the accidents from the beginning, and their progressive extension, would be exactly alike in the case of lesion of the roots and that of the branches. Recalling, gentleman, the totality of the roots which form the brachial plexus, for example; suppose a lesion, involving half of these filaments, it is clear that the nerves of the plexus would not be in all their elements, and that the paralysis would be disseminated to the periphery. Go farther, and admit that the roots of one of the nerves, the median for example, should be partially altered; very well! the muscular sphere of the nerve would not be at all paralyzed; the phenomena would be limited to the filaments which are in continuity with the affected roots. So that in these conditions the roots hitherto sound undergoing lesion, the paralysis will progress just as the terminal roots of the cord had become successively affected. As to the precocious atrophy of the muscles, the electric contractility, and the loss of the reflex motility, they will be identical in the two cases. That which is constant, then, is the progress of the accidents, but nothing proves that this progression should always prove ascending; it can proceed from root to root, as well as from branch to branch; and to be constantly just, the terminology ought to embrrce these two eventualities; this is why I have decided upon the denomination *progressive nervous atrophy*, which is applicable to all cases of this group.

The progress of this malady is of the gravest character, the rapidity with which the accidents spread themselves is variable, but the progression is nevertheless fatal; at the end of a longer or shorter time, the respiratory muscles are paralyzed, and the patient, in the extreme of atrophic emaciation, succumbs to a gradual asphyxia; the power of voiding the urine and fæces may remain normal up to the end. Some facts tend to show that the redoubtable march may be happily retarded under the influence of a treatment based upon tonics, sulphurous baths, and methodical electrization of the muscles and nerves; but in many of the cases the patient has not followed it a sufficiently long time to be sufficiently sure as to the real value of the im-

provement, and up to our present intelligence, these observations do not appear to me to sensibly modify the prognostic formula. As to our man, here, he is lost, and his future will not be long in coming to an end; some day or other, the paralysis and atrophy progressing, this unhappy man will be reduced to a state approaching mummification, and whether asphyxia should come or not, such emaciation is not long compatible with life.

I have said to you, gentlemen, that the lesions of the marrow sometimes coïncide with atrophy of the spinal nerves; Rokitansky has already pointed out two different forms in connection with these two orders of lesions; sometimes the lesion of the marrow is first in date, and atrophy of the nerves, which starts out from the altered point, is a secondary fact; sometimes it is the nerves which are first affected, and the spinal region, from which they emerge, is affected by an extension of the alteration, which goes on gradually; the case of Duménil and the cases of Spedalskhed, are examples of this kind. To these two possibilities it is convenient to add a third, the reality of which is established by an unfortunately very concise case of Klebs, of Berlin;* the two lesions can be contemporaneous, and may be developed separately, the one in the nerves, the other in the marrow; there is not then a continuity between the two alterations. In the case of Klebs the pelvic nerves, the sciatic, and the crural, in their extra-vertebral portion, were in the last degree of fatty atrophy; the cauda-equina, and the nervous roots close by were sound; but the posterior cords of the marrow presented, up to the cervical region, grey degeneration. Reported solely from an anatomical standpoint, observation is dumb regarding the symptoms.

Seven weeks after this lecture the patient succumbed to the progress of the marasmus; in the last days of his life the immobility and atrophy of the limbs, in all their segments, was complete; the sphere of the lumbar plexus was affected through-

* Klebs, Hernia diaphragmatica mit Fractur des rechten, Rippenknorpelendes und grauer Degeneration des Rückenmarkes (Virchow's Archiv., xxxiii., 1865).

out, but the muscles, animated by the dorsal nerves and by the cervical plexus being intact, no disorder existed on the side of the cranial nerves.

At the autopsy, the encephalon, and the nerves which go out from it and the marrow in all its parts, were found perfectly intact; the lesions were rigorously confined to the spinal nerves, and were as follows. The arachnoid spinal sound upon the median region, before as well as behind, was sown upon the lateral and anterior regions with fibrous and fibro-fatty patches; the most elevated of these patches corresponded to the anterior roots of the fifth cervical nerve, the most inferior were on a level with the last bundle of roots of the marrow, and the commencement of the cauda-equina. These patches, of a white waxen color, did not project from the side of the dura-mater, they detached themselves, on the contrary, in relief from the sides of the marrow; they were of different ages; though they were all smooth and without asperities, all were far from having the same consistence; some of them broke under the fingers like fragments of wax, and the fibroid tissue was scarcely resistant; others, evidently older, resisted more, and the fibrous structure, or rather the fibro-connective, was clearly appreciable. The dimensions of these patches likewise varied; the smallest were of the size of a twenty-centime piece; the most voluminous attained, if indeed they did not surpass, the diameter of a franc piece. Disseminated in the whole length of the marrow, from the fifth cervical nerve, the arachnoidean patches were rare, and not very voluminous at the level of the dorsal nerves; they presented in turn a remarkable confluence at the level of the brachial plexus and the lumbo-sacral nerves. At these points the largest patches were adherent to the pia-mater, and the bundle of roots upon which they were situated. Some patches existed in rear upon the posterior roots of the nerves of the limbs, but they were smaller, and much less numerous than the anterior deposits.

Simple inspection, aided by a comparative examination of the more compromised nervous roots, demonstrated that on a level

with the patches the anterior roots were thinner, transparent, and manifestly atrophied; the dorsal roots, which are normally the smallest, were much larger and more consistent than those of the brachial and lumbar plexus; without doubt these last were atrophied. Besides, the compressed roots, those especially which were adherent to the patches, presented under the microscope a degeneration of the granulo-fatty type, appreciable proliferation of connective tissue; this was fatty atrophy by compression, a process entirely passive, as I have said above. This granulo-fatty atrophy has been found in a less degree in certain terminal branches of the median and cubital; this was the same alteration, but less marked, in the sense that all the nervous tubes had not undergone degeneration; besides tubes which presented neither cylinder axis nor marrow, there were others where the elements were recognizable.

The microscopical examination confirmed, in its way, the results evident to the naked eye, and the process of this malady clearly appeared in all its details. It was a progressive atrophy of the spinal nerves which had been the cause of the accidents; the diagnosis was thus verified, and between the symptoms and lesions there was a perfect accord. But the autopsy had not been spontaneous; it was the result of compression of the roots of the nerves in the vertebral canal, a compression which had brought about secondary lesions of the same nature as in the terminal branches. This fact justified the assimilation which I had established in a clinical point of view between the disseminated alterations of the roots of the nerves and the disseminated alterative alterations of their terminal branches, and it thus confirmed a too often forgotten principle: Viewing it anatomically, physiologically, or pathologically, a nerve is peripheral whenever it quits the nervous centre from which it originates; and for the spinal nerves particularly, the lesion of the roots is a peripheral lesion, just as is an alteration of the branches of distribution, when they give rise to the same symptoms. But our case is the first known to me, in which the lesions of the roots, with integrity of the marrow, have been

sufficiently numerous and sufficiently extensive to produce from the beginning a disseminated paralysis of the four limbs. Finally, atrophy of the nerves has been progressive, but it has not been ascending, and the reservations which I expressed upon this subject, qualifying this morbid form, are thus fully legitimate. The nomenclature, to be just, ought to comprehend in it all the eventualities, and that which I propose, *Progressive Nervous Atrophy*, fulfills entirely this proposition.

The muscles were not examined microscopically; they were pale, colorless, and presented scarcely a third or fourth of their normal volume.

## PROCEEDINGS OF SOCIETIES.

**"Etsi non prosunt singula, juncta juvant."**

ART. I.—PROCEEDINGS OF THE MEDICO-CHIRURGICAL SOCIETY, of Louisville, Ky., as Reported by the Publishing Committee, Drs. J. A. LARRABEE and FRANK C. WILSON.

Dr. Morton, from the Section on Surgery, mentioned the case of Mr. N., who received the contents of a loaded rifle by accident, and died in an hour or so afterwards. The ball, which was a large one, entered below and in front of the trochanter-major, passed through the thigh and scrotum, and lodged in the opposite thigh. Dr. M. saw him about half an hour after the accident, when he was still laboring under the shock. The scrotum was terribly distended with blood, which suggested the wounding of the spermatic vessels, and there was a great deal of effused blood in the thigh, but hardly enough to account for his death by hæmorrhage. He never rallied from the shock, which Dr. M. thought sufficient to account for his death.

Dr. Octerlony alluded to a case which he had seen in a hospital during the late war, in which a gangrenous wound involved the scrotum, and one testicle sloughed out. The other

afterwards increased to nearly double its normal size, and the patient afterwards gave proof of his virility.

Dr. Octerlony, from the Section on Skin Diseases, mentioned the case of a lady, who, in cleaning the house, had handled the lime upon the walls, and while her hands were soiled with the lime, had used them to put back her hair from her face. The next day there appeared an eczematous eruption upon the forehead near the roots of the hair, and upon the neck, and also affecting the ends of the fingers. There was great œdema extending to and involving the eyelids. Under the use of mild, cooling and astringent lotions she soon recovered.

Dr. Childs wanted to know if she had been using her fingers in removing paper from the wall, and thought that if it were so, it might be a case of arsenical poisoning. This was answered in the negative.

Dr. Gaillard (Section on Pathology) had recently seen a case which, in pathological interest, was second to but one other which he had ever witnessed. The patient was a man aged about forty-five, a well-to-do farmer, who had enjoyed good health up to September last, when he began to suffer from pain in the right shoulder, wrist, elbow, and side of the neck up to the ear. This he regarded as rheumatic, and simple and many domestic remedies were used by him for his relief; the pain, however, steadily increased, becoming at times very severe. Having used all the remedies known to the public for rheumatism, medical advice was sought, and several physicians saw the case in the course of a short time. There was some prominence in the right hypochondriac region; the tumor was punctured by his medical attendant by means of a hypodermic syringe; pus found, and the case pronounced to be one of hepatic abscess. After the puncture the pain became unendurable, notwithstanding large and repeated doses of morphia were given.

He now began to cough up large quantities of a reddish-brown material, a kind of grumous matter, and upon the occurrence of this latter symptom all pain ceased.

When Dr. G. saw him he presented all the appearances of a

man suffering from tuberculosis—cough, emaciation, hectic, colliquative sweats, and diarrhœa. The case was at this time under the care of Prof. Holloway.

Of late he had only expectorated in paroxysms, which return irregularly; being free from cough in the interim. Several days ago prominence in the hypochondriac region was again noticed, and there was another period of expectoration. The amount brought up was about half a pint, and the peculiar matter or substance had been subjected to a careful chemical and microscopical examination, yet, strange to say, neither bile nor blood can be found in it. Percussion elicits a flat sound over the right side of chest both behind and in front even up to the clavicle. The vesicular murmur is entirely absent, and the bronchial sounds, inaudible in the lower lobe, become slightly audible in the upper portion of the lung. The puerile breathing in the other lung is very loud, and constitutes a distinct feature in the physical examination.

Dr. G. propounded the following question in regard to this remarkable and inexplicable case—viz., if it were a case of hepatic abscess, why were the lobes of the lung consolidated?

Dr. Satterwhite suggested that accumulation of fluid in the pleura, and consequent compression might have caused the consolidation and account for the pain as well.

Dr. Octerlony thought if the ramifying tubes in the lungs were free, there should be bronchial breathing, and could not well understand why such was not the case if the lung was consolidated.

Dr. Satterwhite had seen many cases of consolidated lung, but could always hear bronchial breathing.

Dr. Gaillard did not wish it to be understood that there was no bronchial breathing, but that such breathing was diminished.

Dr. Octerlony could not harmonize the symptoms mentioned with those of consolidation, and thought there should be heard shortened inspiration lowered in pitch.

Dr. Gaillard recapitulated all the important points in the history—the lung was pervious at the time the tumor appeared,

and during the time of the patient's acute suffering. He had at no time during his illness any pneumonia.

Dr. Octerlony thought there existed latent pleurisy, and would expect to find effusion in the pleural cavity. He thought it probable that there might exist a central consolidation dependent upon a thrombus.

Dr. Satterwhite mentioned a case in which the diagnosis had been hepatic abscess, with thrombus interfering with arterial circulation. There was œdema of right side of chest, with absence of radial pulse on that side.

Dr. Gaillard stated that there was no orthopnœa in this case, and there was œdema of that whole side from axilla to the hypochondriac region.

NOTE—This case was subsequently operated upon for empyæma. The pleural cavity contained a large quantity of grumous, reddish fluid, intermingled with laudable pus. The middle and lower lobes of the right lung were honey-combed by large sinuses communicating with the liver. The case did well for a time, when hectic supervened, and the patient succumbed from asthenia. The operation was well performed by Prof. Holloway. The family refused to allow a post mortem.

Dr. Morton related an interesting case of hepatic abscess, in which, after running the usual course, sudden collapse occurred, with subsidence of both pain and tumor. This was followed by a second and third swelling, with pain and sudden subsidence of the tumor, with pus in the stools.

Dr. M. thought it probable that these were abscesses of the liver, which had opened into the intestine or into the ductus communis choledochus.

Dr. Forrester would like to know if abscess of the liver was of more frequent occurrence than formerly? As he had heard of so many cases recently it led him to ask the question.

Dr. Gaillard thought that not much was known as to the rational cause of abscess of the liver, thrombus excepted.

Dr. Wilson then reported the following case of abscess of the liver, which he had treated in his wards at the City Hospital: John Peebles, American, tailor, aged thirty-nine, admitted June 17, 1871.

*June* 21*st.*—He states that about eight weeks ago he noticed a pain in the abdomen, followed by a swelling, which lasted a short time, and then subsided. The pain was first felt in the region of the liver, and gradually extended across the abdomen in the direction of the stomach. Has been a constant drinker, but not to an excess until within the last two weeks. Six weeks ago first noticed that he had a sallow cachectic appearance, which is still present in a marked degree; lips pale, and tongue flabby; pulse 120, and weak; appetite poor, and troubled frequently with diarrhœa. Has also frequent night sweats. Phys. ex. lungs; percussion sounds normal; respiratory murmur somewhat diminished on the right side; heart-sounds clear. There is some tenderness over the abdomen. The liver is about normal in size, but very tender, both on percussion and palpation; stomach dilated and tympanitic. There is a considerable quantity of fluid in the abdominal cavity; urine normal in color; contains no albumen, and no casts found by microscopic examination. Ordered

℞.—Tr. Ferri. Mur., ℥i.;
Quiniæ Sulph., ʒi.;
Potassæ Chlor., ʒi. M. ft. sol.

Sig.—Twenty drops ter. in die. Also,

℞.—Glycero-Pepsin., ℥iv.

Sig.—Desert spoonful after each meal.

*July* 5*th.*—Had a slight chill yesterday morning about 6 o'clock, and one again this morning about the same time. Temperature, 101.5°. Ordered

℞.—Quiniæ Sulph. Carbolate, ʒss.;
Aq. Cinnamon, } aa. ʒi. M. ft. mist.
Syr. Simp. }

Sig.—Desert spoonful three times a day.

*July* 10*th.*—Has had no more chills, but has hectic fever every day. Appetite very poor. Ordered

℞.—Quiniæ Sulph., grs., xxiv.;
Elix. Tarax., Co., ℥i.;
Acid Carbolic, gtt. vi. M. ft. sol.

Sig.—Teaspoonful three times a day.

*July* 14*th*.—Respiration 30 per minute, and labored. Temperature 102°. Pulse 120. Had diarrhœa yesterday. Ordered

℞.—Tr. Opii. Camph., ℥ij.

Sig.—Teaspoonful every two or three hours until bowels are checked; also continue the quinine, three grains three times a day. Inserted the needle of an aspirateur down into the abdomen, about on a level with the lower edge of the liver, and drew out about an ounce of a yellowish-red fluid, which, upon microscopical examination, was found to consist of pus and blood with a few liver cells. The diagnosis of abscess of the liver was, therefore, confirmed.

*July* 16*th*.—No irrritation produced by the abdominal puncture, but is very weak, and eats little or nothing. Has been taking daily about eight ounces of brandy.

*July* 18*th*.—Is sinking; has a very anxious look; corrugated forehead; pale lips; tongue dry and slimy, and protruded with difficulty. Pulse 120; respiration 36; temperature 100.5. Has occasional rigors; is entirely too weak to stand the evacuation of the abscess. Continued gradually to sink, and died July the 20th.

Autopsy thirteen hours after death. Rigor mortis well marked; body much emaciated, and great hypostatic congestion of dependent parts.

Head not examined. Lungs; right lung compressed to about the size of a double fist by about a quart of a turbid yellowish fluid in pleural cavity. Left lung and pleura normal.

Several ounces of serum found in pericardium; no adhesions, and heart normal in size; valves healthy. On cutting into the abdominal cavity about a gallon of a dark-colored serum escaped, followed by a quart or more of pus and lymph. The intestines and walls of abdomen were extensively matted together, forming irregular sacs, containing pus and serum. The liver weighed fifty-eight ounces, and was very fatty, as shown by microscopic examination. Upon the convex aspect of right lobe, near the end of the liver, there was a cavity holding one

and a half or two ounces. This communicated with a sac between the diaphragm and convex surface of the liver, limited by adhesions, and extending posteriorly, so as to touch the right kidney, and anteriorly several inches beyond the edges of the liver, and probably communicated with sacs in the lower part of abdomen. There was also a communication through the diaphragm with the right pleural cavity. Spleen normal in size. Kidneys slightly fatty, and the upper extremity of the right covered with lymph.

Dr. Gaillard gave a short history of a very remarkable case which he had recently seen, the case being under the care of Dr. Kearns, of Covington, Ky.

The patient, a married lady, had been a great sufferer from headache, and had been under treatment for the same both from the Profession and from empirics; finally, and at the time Dr. Kearns saw her, a tumor had made its appearance on the left side of forehead somewhat near the roots of the hair.

Dr. K. removed it, and with it small quantities of cheesey substance, and there being a good deal of hæmorrhage, the opening into the cranial cavity was plugged. Upon the removal of this plug, an opening was found leading directly downward and backward into the brain; the finger could be inserted fully two and a half inches, and the wing of the splanoid bone plainly felt.

Dr. Gaillard, with others, saw the patient at the meeting of the State Medical Association, and there then existed an opening through the tables of the skull nearly an inch in diameter, and as perfectly round and regular as if it had been most carefully made with a trephine. The opening had diminished a little in depth, being about two inches, and was suppurating freely, and beginning to granulate. Dr. Kearns assured him that, strange to say, there had at no time been any perceptible loss of brain substance, nor functional derangement of the patient, and she herself assured him that she was able to attend to her household duties as usual, and had not suffered pain since Dr. Kearns removed the tumor.

Dr. Wilson reported the following case, for the history of which he was indebted to Dr. Taylor, the resident graduate in charge of his wards at the hospital:

Jacob Hesselbach, aged thirty-five, Switzerland, admitted to hospital April 15, 1871. Previous history: In 1860 he suffered from dizziness for four or five months, but recovered completely. In 1861 he had a venereal sore, which was cauterized, and soon got well without any constitutional symptoms. In 1868 had intermittent fever for a short time, but was cured. In August, 1869, again suffered from dizziness and headache, the pain being mostly confined to the right side of the head, and has been since that time. In October, 1870, external strabismus and double vision were first noticed. He states that in October or November, 1870, he took large doses of strychnine, after which he became much worse, his mind became impaired, and he walked with difficulty. On admission into the hospital he was ordered twenty grains of bromide of potassium three times a day, also to be freely purged three times a week with compound jalap powder.

*May* 2*d.*—Has been growing worse since admission, and his mind is so much impaired that no satisfactory history can be obtained. His hearing on the right side is impaired, and he complains of constant buzzing in that ear. Cutaneous sensibility somewhat diminished, but no difference in the two sides can be detected. There is some protrusion of the right eyeball, with external strabismus and dilatation of pupil. The ophthalmoscope reveals great congestion of retina and papilla, and dark patches scattered over the retina.

℞.—Potas. Bromide, ʒiiss.;
Potas Iodide, ℈iv.;
Aq., ʒiv. M. ft. sol.

Sig.—A tablespoonful four times a day.

*May* 13*th.*—Is getting gradually worse; staggers now in walking, and drags slightly the left leg, but still has power over it.

*May* 15*th.*—Much worse; mind so much impaired that he

wanders around, not knowing where he is, and passes his urine unconsciously.

*May 30th.*—Has been almost perfectly unconscious for a week, and has to be fed like a child. It is only occasionally that he can be made to speak or show any sign of consciousness.

*June 4th.*—Worse, and is profoundly comatose, and cannot be aroused at all. Respiration stertorous, and fourteen to the minute. Pulse 64.

*June 5th.*—Patient much the same, except that his pulse has become much more frequent and weaker. He cannot be made to swallow food of any sort.

*June 6th.*—Died this evening at 7½ P. M.

Autopsy thirty-eight hours after death. Body not emaciated, rather bloated and great hypostatic congestion of dependent parts. No examination made of any organ but the brain. The calvarium much thinner than usual, and upon raising it the brain was found almost diffluent, so that upon its removal it fell to pieces. A tumor about the size of an orange was then seen lying upon the base of the skull, a little to the right of the median line. Upon cutting into it a mass of dark clotted blood was discovered enclosed in a sac, which could be traced down to the termination of the right internal carotid in the circle of Willis. The body of the sphenoid had been broken down, and it had broken into the right orbit, thus accounting for the protrusion of that eye. The sixth nerve was found pushed aside, but uninjured, while the third nerve was destroyed, which explained the external strabismus. A thick, long plate was found in the falx-cerebri near its anterior extremity.

Dr. Larrabee then reported the following case of late descent of testes, with acute testitis, followed by hernia, which became strangulated:

On the 7th instant I was summoned to visit George H., a bright little boy aged two years and six months, he had cried much during the previous night with pain, which was attributed to the bowels, and thought to be due to some indiscretion in eating or drinking, until this morning. While his mother was

giving him a bath she noticed a swelling in both groins, which was extremely tender to the touch; very hot, and feverish; for this my services were sought. I found the swelling, as above mentioned, at the site of the inguinal canal, and at the external abdominal ring; much larger upon the right than upon the left side. The mother remarked that she had never noticed anything (meaning the testicles) come down, as in the other boys. Upon closer examination I found the testicles at the external ring, up to which I could pass my finger, carrying the empty scrotum before it. An acute testitis was evidently set up in both testicles in this case, but the right was much more severe, the organ being larger and more tender to the touch. I ordered a few doses of hydrarg. cum creta to be given, and repeated until stool, and fomentations of inf. opii., with mur. ammonia to be constantly applied.

*June 8th.*—To-day upon my visit, about twenty hours from the time I first saw him, he had had a number of good stools; the general excitement and fever were gone; swelling reduced to one-half; the testicles could be felt; still tender and about the size of a pigeon's egg.

*June 19th.*—The mother of the child called upon me this morning, and stated that, as far as she could see, everything was well; that he was playing upon the floor, feeling no pain unless the testicles were touched. I ordered the grey powder to be suspended, but continue the application, as she did not think it necessary to see him until he should get worse, in which case she agreed to send me immediate notice. I heard no more of the case until the 20th instant, when the mother came again, and stated that he had kept them awake with pain as before, only that the pain was confined to the right side. In the evening I called to see him, and found a hard tumor extending from the external ring almost to the bottom of the scrotum; the testicle upon the opposite side was down, but could not be detected upon the right side. Upon inquiry was informed that he had had a stool in the morning, which was scanty and accompanied by much straining. Ordered fourth of a grain of calomel, to

be repeated every two hours until stool, and belladonna lotion to be applied.

*June* 21*st.*—Passed a very restless night, with much fever, pain, and vomiting; takes water greedily, which is quickly vomited along with a greenish fluid, having an offensive odor. Not particularly fæcal. The entire swelling has a stony hardness; no impulse can be felt during vomiting or crying. Having no longer any doubt that a hernial pouch had descended along with the testicle, and become strangulated, I patiently tried taxis, making use of the warm bath and postural method, but without avail. Signs of exhaustion were rapidly coming on, with spasmodic twitching of the muscles. Pulse 130, weak and compressible; clammy sweat over the body, and extremities cold; constant retching and desire to vomit. In this stage I sent for chloroform, and obtained the valuable assistance of my friend, Dr. Wilson. After giving a little brandy and egg, which was retained, chloroform was administered, and after manipulating for nearly half an hour, I had the satisfaction to hear, or rather feel the gurgle of matter escaping from the gut, and in ten minutes the hernia was reduced. A bandage and pad were applied, and we left him. In the evening I found him fully over the anæthesia, with warm skin and good pulse. He had had a most copious and offensive black stool immediately upon waking.

*June* 22*d.*—Applied truss.

*June* 23*d.*—Doing well, playing about the house. Case discharged.

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MEETING OF THE ABINGDON (VIRGINIA) ACADEMY OF MEDICINE.

At a regular meeting of the Abingdon Academy of Medicine, held August 7, 1871, the following preamble and resolutions were unanimously adopted:

Whereas, there seems to be an earnest wish on the part of the medical fraternity throughout the State to secure some legislation more favorable to the interests of our profession than has heretofore been made; and whereas we, of the Abingdon Academy of Medicine, are equally solicitous in regard to the same; therefore be it

*Resolved*, 1st. That we, of the Abingdon Academy of Medicine, do heartily approve and endorse the efforts of the State Medical Association, looking to the more efficient organization of the medical profession, and the higher elevation of the medical standard throughout the State; and we pledge our earnest support and coöperation in all measures tending to the elevation of the standard of medical education, and the proper recognition by law of that standard, in order to secure to our profession such protection as shall lead into rather than expel from our ranks the best talent of the land, and thereby advance the interests of a science vital to the welfare of the people.

*Resolved*, 2d. That we approve of the efforts now being made for the establishment of a Medical Board of Examiners, and deem this measure the only efficient way to guard the Profession from humiliation, and the people from the dangers of ignorance and superstition; *i. e.*, quackery.

*Resolved*, 3d. That we regard the passage of a bill by the Legislature securing the above objects of the utmost importance, and of the highest interests to the Profession and the people.

R. J. Preston, M. D.,
W. F. Barr, M. D.,
Thomas E. Brown, M. D., } Committee.

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## ORIGINAL CORRESPONDENCE.

**"Sit mihi Fas scribere audita."**

Richmond, Va., October 16, 1871.

*Dr. E. S. Gaillard:*

Dear Sir,—If you think the following case of sufficient value to occupy space in your valuable journal, you can publish it; if not, throw it aside.

On the morning of April 13th George Woodson (colored) asked me to see his wife, Harrietta Woodson, stating that she was suffering from mumps, and that "it had fallen into her breast."

On visiting the patient I found her suffering an attack of the mumps, both parotids being affected. I also found the left

breast very much enlarged and elongated. She was nursing a child, six months old, from the right breast, and had also been nursing from the left breast up to this attack. The swollen breast was uniform and elastic; tender, yet not certainly presenting any fluctuation, so I was in doubt as to the existence of fluid within. There were no hard parts or nodulations.

The patient being feverish, I ordered a saline purgative, and a liniment with which the breast was to be bathed.

*April* 14*th.*—The bowels have been well purged; less fever, and the breast, on examination, presents no marked alteration. It was less painful and less sensitive to the touch.

*April* 16*th.*—On visiting the patient to-day, I find that while the breast is less painful, it has enlarged, and on its right, a speck about one and a half inches above the nipple, fluctuation can be detected. At this point, with an ordinary lancet, I punctured it, and, to my surprise, a pint of almost colorless fluid spouted out to the distance of four or five feet. As soon as possible a saucer was placed so as to collect the fluid, which continued to flow until two ordinary saucers had been filled. It was only towards the end of filling the second saucer that any purulent matter made its appearance. The third saucer was filled with the serous fluid and a thin, cream-like pus. The whole quantity of fluid discharged (not measured) must have been about twelve ounces, of which less than two were purulent matter.

*April* 17*th.*—Breast very greatly reduced in size; no discharge since the flow ceased on yesterday.

*April* 20*th.*—Breast returned to its normal condition, only a little tender on being handled. The orifice has healed, and there has been no discharge since the day the breast was lanced. There remains some little hardness in the lower portions of the lactiferous tubes.

*April* 22*d.*—Breast continues a little tender in its lower portion, near the nipple.

*April* 25*th.*—Is quite well, only the lactiferous tubes are

filled with milk. After a few days, nursing from the breast was resumed, and has been continued to this time.

This case is unique, so far as my experience of forty years, or my reading goes. If such cases have been recorded, they have been overlooked by me, as well as by the medical friends to whom I have detailed this case.

How are we to account for this large effusion of serum into the cellular tissue of the breast? Was this in fact and in truth a metastasis of mumps to the mammæ? If so, did the mumps poison so modify the blood vessels and lactiferous tubes as to cause this exosmosis or effusion into the cellular structure?

Sincerely yours,

ALBERT SNEAD, M. D.

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PADUCAH, KY., 1871.

*Dr. E. S. Gaillard:*

Stephen (freedman); no family, an orphan boy, age 13 years. As far back as he can recollect has been suffering from the same cause; better and worse at times. Occasional discharge from the urethra of small specimens or spiculæ of stone. Oftentimes his urine filled with blood and mucus, or pus, and towards the last a species of ascarides or thread-like worm, which would wriggle on the ground. An abscess formed about one inch below the umbilicus. The sound could discover no stone in the bladder. Abscess continued to enlarge; boy suffering agony, with great constitutional disturbance, vomiting, etc. On puncturing the skin urine followed, then mucus and blood, similar to that discharged from the urethra.

While the lateral operation for stone is the only one thought of at present, yet we were led to follow the dictates of Nature, in this instance, and performed the high operation—found no stone—death in a week afterwards. Ate nothing the last three weeks, except egg-nog, toddy, and coffee.

Post mortem for the purpose of ascertaining something about the worms. The stone was found outside the bladder, between the layers of the external and internal muscles of the abdomen,

adjoining the symphysis pubis. The stone we sent you by express. The worms were like pioneers—eating and making tracks (like worm-eaten wood) in advance, for the stone to follow, and make way out.

Truly yours,

J. D. THOMPSON, M. D.

NOTE.—Stone not received.—ED.

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RALEIGH, N. C., 1871.

*Dr. E. S. Gaillard:*

Mr. J. L. N., an old gentleman, has suffered from dyspepsia for years, complains of buzzing in his head, pulsation in the epigastrium, and soreness around the waist. Does not use tobacco, tea or coffee. Appetite good, bowels generally regular, urine normal in quantity and quality. During the last twelve months has suffered greatly from insomnia. Does not sleep any night more than three hours, frequently not half an hour. Tried bromide of potassium in large doses, but with only temporary benefit. Is very unwilling to take the preparation of opium.

I put him on the hydrate of chloral, in twenty (20) grain doses, to be repeated in an hour if necessary. It had a very happy effect, one dose procuring a good night's rest, but he thought he was more nervous and restless the next day. We continued this treatment for nearly two weeks, when he complained of dimness of vision, which, rapidly increasing, I suspected that the hydrate of chloral caused it, and discontinued its use, when his vision improved, and gradually became as good as it was before using the hydrate of chloral.

E. BURKE HAYWOOD, M. D.

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## REVIEWS AND BIBLIOGRAPHICAL NOTICES.

**"Judex damnatur cum nocens absolvitur."**

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A TREATISE ON DISEASES OF THE NERVOUS SYSTEM. By W. A. HAMMOND, M. D., New York; Professor of Diseases of the Mind and Nervous System in Bellevue Hospital Medical College. New York: D. Appleton & Co. 1871.

It is impossible to attempt a review of this work in the short

space allotted to the review department in the present issue of this Journal. The distinguished author is well known wherever neurotic pathology is prosecuted and carefully studied. While many of his views, as presented before the public in secular papers during the past three years, do not, it is believed, secure the assent and support of many distinguished physicians, still it is impossible to withhold from Professor Hammond the deserved testimony, that he has done more, and is doing more for pathological medicine in America than any one else in past or current medical history. With a naturally fine mind, enriched by constant and devoted study, with an enthusiasm for his specialty, and with a conspicuous and admirable taste for investigation and elaborate research, he deservedly commands, as a physician and scientific man, the hearty respect of all who are capable of appreciating such excellent and praiseworthy characteristics. That Professor Hammond should enunciate occasionally psychological propositions which cannot secure professional endorsement, is well known, but this does not and should not militate against his possession of the entire respect of the Profession for his unquestioned acquirements and conspicuous erudition. Possessed, confessedly, of these, his work on the nervous system will be read with interest and profit by all who desire instruction, or even seek for entertainment. It is a valuable work; one which will command willing respect even from admitted authorities on the subjects presented. A fair conception of the field cultivated and of the fruits presented may be obtained by examining the following extract from the work: "The treatise embraces an introductory chapter on the instruments and apparatus employed in the diagnosis and treatment of the nervous system, with five sections. One of these treats of diseases of the brain; the second, diseases of the spinal cord; the third, cerebro-spinal diseases; the fourth, diseases of the nerve-cells; and the fifth, diseases of the peripheral nerves." Diseases of the sympathetic system are not presented; nor are cerebro-spinal meningitis, chronic alcoholic intoxication, and Graves's disease.

Dr. Hammond claims for his work that it is not a compilation; that it is essentially original. It is proper, in justice to both Dr. Hammond and to the Profession, to say that in this claim he is correct. It is just to him to say that many of his views are novel, plausible, and original; it is due to the Profession to add that they are in no respect responsible for much that is heterodox and untenable. It was once stated by the wielder of a caustic pen, in one of his reviews of a work, that "its errors constituted its only claim to originality." While many of Dr. Hammond's views are believed to be erroneous, it is just and welcome to say, that these alleged errors constitute a minor portion only of the volume. As a whole, the work is highly honorable and creditable to the author.

It is issued by the Messrs. Appleton in excellent style.

THE MANAGEMENT OF INFANCY—Physiological and Moral—Intended for the Use of Parents. By ANDREW COMBE, M. D. Revised and Edited by Sir JAMES CLARK. First American from the Tenth English Edition. New York: D. Appleton & Co. 1871.

It may not be as interesting to American as it is to English parents to say that this volume is, by her consent, dedicated to the present Sovereign of Great Britian. Such a dedication, however, made, as it is, by Sir James Clark, shows that the volume has received great attention abroad. The author, Dr. Combe, has long been known, by all who know anything of consequence, as the distinguished and successful author of works on physiological and hygienic science. He was as great a man, as he was good, and his goodness was proverbial. Sir James Clark, an excellent judge of both brain and heart, is unable to write of his friend without manifest evidences of a nature filled to overflowing with all the elements of a whole-souled affection and an unlimited respect. Never did an editor take up the pen in behalf of a deceased friend with as many glowing and touching eulogies of all the traits which, in his friend, had conquered his heart, and held captive his entire nature; a captivity so complete as to be an absolute, yet beautiful slavery. Where

one looks into the interior circle of medical men, in cities, hamlets and villages, and (sad to relate) sees so constantly manifestations of tergiversation and obloquy; of distrust, malevolence and ingratitude; of unmanly detraction, cowardly and despicable competition corporate and personal, it seems almost like a haven of rest, in the midst of angry storms, to take up this little volume, and see one medical man offering in behalf of the life of a friend testimonies which win the heart, while they convince and hold captive the mind. Beautiful indeed it is to see one noble physician eulogizing the life and intellect of his medical brother; but when that brother is beyond the possibility of the smallest material reciprocation, how much more beautiful is it to see a medical brother covering his friend with glowing laurels, and planting the freshest immortelles about his recent and premature grave. These beautiful tributes give value to this work, but, apart from them, the volume is valuable to parents, and to younger and more inexperienced physicians. The instructions given are simple and comprehensive, judicious, and well digested. The work is arranged like many others of similar character, but it is the material more than its arrangement which gives value to the volume. Those interested can be assured in the purchase of this work of excellent and profitable reading.

HEADACHES—THEIR CAUSES AND CURE. By H. G. WRIGHT, M. D., M. R. C. S. L., etc. From the Fourth London Edition. Philadelphia: Lindsay & Blakiston. 1871.

This little work has been "for some time out of print." It is again presented to the medical public. On its last appearance it was duly noticed. It is only proper to say that all which was then so favorably said is again affirmed. The author classifies headaches; giving for each classification the apparent cause, and assigning for each a special treatment. All are interested in such a work, for who is so fortunate as to escape the fearful onslaughts of the hydra-headed monster, whose protean manifestations Dr. Wright so well describes, and so aptly undertakes to subvert and destroy? As all suffer, and all seek re-

lief, such a work is possessed of a catholic and universal interest. It is commended as the best of its kind.

The publishers, Messrs. Lindsay & Blakiston, have issued the volume in a very neat and substantial form.

## MISCELLANEOUS NOTICES.

### Transactions of the Medical Association of the State of Alabama at its Meeting at Mobile in March, 1871.

The contents of this volume make it one of the most remarkable publications of the present year; indeed, there is but one element in regard to it more remarkable than its contents, and that is its history.

The publishing committee consists entirely of teachers in the Mobile Medical College. It was understood that a material part of the business of the Association at its last meeting was to secure an official and corporate endorsement of the present policy of the Mobile Medical College. This College was, previously to the late war, fairly equipped by the State. In the years immediately succeeding the war, the policy of the College was to charge $140 for its tickets, and $5 for its matriculation fee. Its Faculty was enthusiastically in favor of this policy, and in the spring of 1869, at the meeting of the American Medical Association, in New Orleans, the Faculty of this College fully committed itself to a high-fee policy. Its representative vote was not only thus given, but any other course on the part of colleges was virtually rebuked and repudiated. These highly meritorious views on the part of the Mobile Medical College Faculty commanded, very deservedly, general and entire respect. One or two college sessions gave them an opportunity of admiring their policy and the high-fee flag which, with pardonable enthusiasm, they had nailed fast to the mast-head of their Institution. For some reasons, which it would not be generous to mention, this Faculty failed to obtain a class; they lectured to a beggarly row of empty benches. It was evident that something must be done, and that quickly.

Should that flag, which had been so gallantly raised, fly to the

last over a distressed and high-spirited garrison of true and devoted men, or should it be lowered and repudiated? The period of indecision was a brief one; the flag was taken ignominiously from the proud place which it had occupied. The garrison, however, did not prefer an honorable surrender, with the preservation of an unstained flag. They determined, like certain cruisers, to fly some other than that which had been so fully, so confidingly entrusted to them. These whilom warriors confessed that they were unable to carry out and defend their chosen battle-flag, and they now determined to hoist a white flag; the flag of peace and philanthropy! Henceforth they were to be no longer soldiers struggling in a cause believed and declared to be right; they were to become, like Charity, meek-eyed and lowly. All other virtues, said these now peaceful gentlemen, are beautiful, "but the greatest of these is charity." Let us then, they exclaim, be charitable!

With the dust of battle meekly washed away, with spirits cleansed and minds purified, they were henceforth to be the fit and appropriate embodiments of the greatest of all the virtues. Who can fail to admire such a spirit, or who so depraved as not to rejoice that so much of the good and the beautiful should be left to glorify and adorn a world. These gentlemen were henceforth to be the noblest representatives of charity; they were to become philanthropists. Philanthropy! who so eloquent as to fitly apostrophise it; who sufficiently musical to chaunt its praises? Orators have made fame in eulogizing it; poets have sung their sweetest strains in glorifying it; the painter's easel has indeed been transformed into a fit altar, before which the world has sought to worship and to magnify it. Can it be surprising, that when these gentlemen of the Mobile Medical College Faculty heroically resolved to renounce the pitiful, commonplace desire for gain, and to sacrifice their time, their fortune, and themselves upon this holy altar of charity, that they were not applauded and eulogized; that they were not decorated, in imagination at least, with the pure robes of the noble martyrs? They were applauded. The world, the whole world, stood on

the tiptoe of expectation. All said, Astor and Girard and Peabody have each done nobly; they have sacrificed freely of their purse for the good of those who thirst after knowledge, but here is to be a spectacle which transcends all, which, indeed, transcends history. Here is not one man, but a body of men who have resolved upon sacrificing not their purses only, but their time and their talents; their all. Here, for the first time, are living men who are to be even more wonderful than those most wonderful of all men; those glorious ones familiarly known as "our revolutionary soldiers." How are they to accomplish their noble purposes? The genius of history is invoked. She will tell the touching, the wonderful story.

This wonderful Faculty discovered, for the first time, a year or two since (after the failure with their battle-flag) that the State of Alabama had equipped their school. They had seen the equipment for more than ten years, but they had not (strange as it may seem) appreciated the glorious fact. As the Italian, under his beautiful sky, may stand upon the glorious Monte-Pincio and fail to realize, as he looks upon the wealth of Nature so lavishly pictured in the scenery before him, that he is rich in the possession of such classic and historic beauty; as the dull peasant of the Alps may have looked for years, with a wholly unappreciative soul, on the gigantic wonders of the sublime creations around him; so this guileless Faculty had actually for years been wandering around and amidst the glories of their magnificent collegiate wealth, and yet had been wholly unconscious of their stupendous possessions! Indeed, with such fabulous wealth, they no longer need that vulgar commodity termed money; they can well afford to spend and be spent in the holy cause of their adoption. Henceforth, as teachers, they would teach for nothing.

As they resolved, so they did. In their catalogue, it is historically true that they actually offer to give to their students their colossal mental wealth, etc., without money and without price. The reader of their catalogue is actually aglow before the record of such fabulous munificence. He reads on, and—

the golden apple becomes a mass of revolting ashes. He will not believe what he reads. The old reader is certain that his spectacles are playing him falsely, and he takes them off and cleanses them; but on resuming them, however, the direful statement still glares at him in all of its indescribable repulsiveness. The young reader distrusts his ability to properly construe the text before him, and seeks aid, for he cannot believe that what he reads is really intended to mean what, to him, it appears to mean. The old and the young are soon alike aghast, mortified, confounded. What is this in the catalogue that so confounds them? What is it?

Those noble gentlemen who charge nothing for their lectures, charge each student $25 for being in the lecture-room. The Professor's lectures are given as a charity, but all who come for this "most precious gift" are charged a gate fee of $25!! Is this then the free Medical School of Mobile? History veils her face! Shameful and distressed she cries in sadness—yes—this is the free Medical School of Mobile.

But what is that collection of men in the distance; that singular crowd hurrying away? Those are they who so recently passed as martyrs; they are the Mobile philanthropists; the recent apostles of charity!!! The veil has been removed, and they are hurrying away to hide themselves.

So it is; when the equipment of the Mobile school was fresh and new, the fees charged were $140, but now that ten years have elapsed, this equipment, like wine, has been so improved by age, that in virtue of its profession, the Faculty have become rich; they prefer to teach for nothing. They are the curious pioneers in the new field of free medical education. The public are respectfully forbidden to ask what becomes of the matriculation fee of $25 from each student, and the graduation fee of $30 for each diploma. These fees, of course, do not reach the Faculty, for they repudiate the obsolete idea of charging students for instruction, and are the confessed, sincere and noble advocates of free medical education!!!

Strange indeed, that a body of enlightened and accomplished

gentlemen can suppose that the public can be thus imposed upon; that it does not fully appreciate the fact, that the Mobile Medical College is not a free medical school, but that, while repudiating most earnestly the policy of low-fee medical schools, it stands forth as the lowest fee school of all. Still more strange, that this school can suppose that the Profession of Alabama and the surrounding States will sustain or even sanction such a policy. Strangest of all is it, that they should expect a vote of endorsement from the Medical Association of their State, and failing to secure this, that the volume of Transactions can be so managed with impunity (not success), as to give themselves and their policy the appearance of success, while the bone and sinew of the Profession of Alabama are to be manacled, and their cries and remonstrances suppressed!!

These are strong charges to be made against these gentlemen; but should they not be made if they are true? Where a volume of Transactions is issued, as this has been, full of inaccuracies and errors; partisan in its management and preparation; representing occurrences and speeches to have been part of the history of a meeting when such occurrences and speeches have been since created; suppressing papers, because they did not tend to foster partisan policies, and publishing, for a manifest purpose, other papers, in defiance of the wishes of their authors, and in violation of all usages and rule; is it not proper when all this is done, that the medical Press of the country should come to the rescue of a body of State physicians who are, until they can again meet, devoid of help; who are misconstrued, misunderstood and misrepresented? No one can fail to see that it is not only proper for the medical Press to speak, to censure and to expose, but that it would be culpable not to do this.

What then are some of the grievances of which the Alabama physicians, members of their State Association, have to justly complain in connection with this volume of Transactions? Dr. Riggs, of Selma, was not allowed even to read a paper on medical education, because it was understood to condemn the policy of the Mobile Medical College. His paper was subsequently

published in this Journal; it was able and effective. Dr. Weatherly's address was published, though it was not referred to the publishing committee, and though he refused to furnish his manuscript to this committee. Speeches made by himself and Dr. Williams in opposition to the school policy indicated have not appeared; while the speeches of a counter character have appeared; most of these last speeches never having been presented on the floor of the Association. Indeed, these Pickwickian speeches have been since prepared, and Dr. Weatherly's address was published to furnish the opportunity of publishing these recent preparations. Dr. Weatherly's paper on surgery is published as if written by Dr. Williams, and Dr. Williams's paper is published under Dr. Weatherly's name. Dr. Cochran made strictures upon Dr. Gaillard, of Kentucky, and these strictures were carefully published, but the effective and generous reply of Dr. Lynch has been suppressed; his very name is unmentioned in this connection.

Dr. Cochran makes an abortive and unhappy effort to condemn the policy, adopted by the Louisville Medical College, of extending generous aid to the sons of physicians, and to the poor and destitute young men of the country. Surely, one's quiver must be indeed poverty-stricken if this be the best shaft it can afford. As feeble as is the shaft, however, the manner in which it is hurled is, if possible, even far more feeble. As Webster replied to Hayne, it may well be said, "the shaft has not reached its mark, for there is not strength enough in the bow."

While there is much to condemn in this volume, and while condemnation has not been withheld, it is proper to say, and it is indeed pleasant to say, that this condemnation is addressed against the public record only of those implicated. Of themselves as physicians and gentlemen, the reviewer welcomely records his kindliest and pleasantest feelings; as accomplished physicians and cultivated gentlemen, they have a right to respect, and some to admiration; this is freely and most pleasingly awarded to them.

As to the professional and literary merits of the volume, it is

fair and just to say that they are very prominent. All of the papers are useful, and many of them are instructive and valuable. Some of them will command future attention.

TRANSACTIONS OF THE KENTUCKY STATE MEDICAL SOCIETY FOR 1871.

As the proceedings of the last meeting of this Body were published in this Journal, it is unnecessary to add much more. The volume is well prepared and issued. The paper and typography are unusually good. Messrs. Davidson Bros. & Co. have done credit to their house in publication of the work. This volume is very much smaller than the transactions of other State Societies. Indeed, it is in this respect a disgrace to the physicians of Kentucky. The attendance at Covington was very small. The proceedings meagre and uninteresting in the extreme, and the papers presented very few in number.

The President's address is good, practical and useful. Dr. G. S. Bryant has an exhaustive paper on gynæcology. It manifests the result of much labor, with an indefatigable spirit of judicious compilation. This paper is embellished with an original illustration of the female pelvis, designed and prepared by the author.

Dr. J. D. Jackson, of Danville, Ky., has an excellent paper on office pupilage. While the medical colleges receive the usual strictures, Dr. Jackson teaches the practical, valuable lesson that most of the trouble and short-comings of medical schools are due to the laziness, infidelity and inefficiency of the office preceptors of students. The great majority of preceptors neglect their pupils in the most shameless and criminal manner, and when the student enters a college they indulge in the most unjust and foolish censure, because the medical colleges are unable in two short sessions to make a practical atonement to the student for the years of neglect and bad conduct of his preceptor. It is certainly easier to accomplish the ultima thule of impossibilities, viz: "to make a silk purse of a sow's ear" than to make physicians of many of the medical students sent by the very

practitioners who suffer from a chronic disposition to heap abuse upon the medical colleges of the country.

The paper on trachoma, by Dr. J. Hale, is highly creditable and useful.

THE TEETH, AND HOW TO SAVE THEM. By L. P. MEREDITH, M. D., D. D. S. Philadelphia, Pa.: J. B. Lippincott & Co. 1871.

There are few physicians doing what is termed a general practice in the country who are not compelled to study, practically, more or less, of dentistry. It is a difficult and perplexing labor to them, and this perplexity is much increased from the want of simple, concisely written, and efficient manuals. This little work is, to all such, confidently recommended, and will prove to be a source of much satisfaction.

## CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—HOR.

*Non-Inflammable Dresses.*—With a desire to mitigate the evils arising from this source, Queen Victoria some years ago commissioned the late Professor Graham, then Master of the Mint, to investigate the subject for the purpose of selecting some means whereby, without injuring the quality or appearance of the fabric, the material of most dresses might be rendered uninflammable, if not incombustible. Professor Graham confided the investigation to the care of Dr. Oppenheim and Mr. Frederick Versmann, whose elaborate report on this subject deserves the most careful attention.

Of all the salts experimented upon by these gentlemen, only four appear to be applicable to light fabrics. The salts are, 1, phosphate of ammonia; 2, a mixture of phosphate of ammonia and chloride of ammonium; 3, sulphate of ammonia; 4, tung-

state of soda. After having tested various salts and solutions intended for the purpose, this last is the only one found to be neither injurious to the texture or color, nor in any degree difficult of application in the washing process. The iron passes over the material as smoothly as if no solution had been employed. The solution increases the stiffness of the fabric, and its protecting power against fire is perfect. This salt offers only one difficulty, namely, the formation of a bitungstate, of little solubility, which crystallizes from the solution; but it was found that a very small percentage of phosphate of soda rendered the tungstate quite stable. The best way to prepare a proper solution is to dilute with water a concentrated solution of the tungstate until it indicates 28° (spec. grav., 1.140) and then mix it with three per cent. of phosphate of soda. The goods are moistened with this solution just before being starched, and they may be afterwards ironed and finished without the least difficulty.

Articles prepared in this way are perfectly uninflammable. They may be charred by exposure to fire, but they do not burn readily unless there is some extraneous source of heat, and they cannot be made to burst into flame. By aid of this discovery, a lady, dressed in the lightest muslin, might walk over a row of footlights, and the only result would be that the lower parts of her dress would be injured. Unless her person actually came in contact with the gas flames, she herself would suffer no injury.—*Boston Journal of Chemistry.*

*Sesquichloride of Iron and Glycerine in Diphtheria, etc.*—Professor Clar, of Vienna, after using pure glycerine with great success in various catarrhal and slight diphtheritic affections, was led to try the addition of sesquichloride of iron in some cases of a more severe type, and the results were very gratifying. He first prescribes a gentle aperient, either in the form of a manna draught or of a few grains of calomel. The latter he considers a powerful antiphlogistic remedy, and of great value when properly used. At the same time cold compresses or cloths applied to the neck or head, or even to the chest, with cold or iced water as drink. He then commences the use of the iron-glycerine,

which consists of two ounces of pure glycerine and twenty drops of the liquor ferri sesquichloridi. Of this mixture half a teaspoonful is given every half hour throughout the day and night. As soon as the symptoms appear to be mitigated, the dose is diminished to a teaspoonful every second hour; and in the intermediate period, with the object of dissolving the exudate, a mixture of two ounces of glycerine and twenty grains of borax is similarly given by a teaspoonful at a time. The iron-glycerine is progressively given at longer intervals, and is gradually replaced by the borax-glycerine.—*Ibid.*

*Glycerine Lymph.*—In Prussia regular revaccination is very generally practised, the law making the precaution obligatory on every person, and the authorities conscientiously watching over its performance. As a natural result, cases of small-pox are very rare. It has, however, been objected, there as here, that lymph is scarce. To make the most of such lymph, as there is, Government has tried its application mixed with glycerine, and the result has been so successful as to lead to a public recommendation of the mixture to official vaccinating surgeons. The manner in which the glycerine lymph is prepared is thus described by the "Reichsanzeiger": The pustules of a healthy vaccinated person are opened with a needle, and the effluent matter carefully removed by means of a lancet, the same instrument being gently applied to assist the efflux. The lymph is then best placed in the hollow of a watch glass, and there mixed with twice its quantity of chemically pure glycerine and as much distilled water. The liquids are thoroughly well mixed with a paint-brush. The mixture may be preserved for use in capillary tubes or small medicine-glasses. The lymph thus procured is considered equal in effect to pure lymph; care must, however, be taken to shake it before use. As the same quantity that now suffices for one is thus made to suffice for five, the discovery ought to be extremely useful in crowded cities.—*Ibid.*

*Therapeutic Value of Glycerine.*—Dr. Fanto (*Wiener Medi-*

*cinische Zeitung*) remarks that leading dermatologists are coming to use glycerine, locally applied, as a substitute for many internal remedies that have been extensively employed in cutaneous affections. Glycerine has proved especially valuable in cases of abormal secretion of sebaceous glands, and has its seat, not, as was formerly supposed, in the subcutaneous connective tissue, but in the corium itself. Sometimes the complaint takes the form of a hypersecretion from these glands. This occurs for the most part in infancy, and is known as *seborrhœa*. It is commonly seen on the scalp, on the face near the ear muscles, and, more rarely, on the extremities. In such cases glycerine acts excellently in softening the hardened masses of sebum on the surface of the skin, and in diminishing irritation of the organs affected. In conjunction with borax, zinc, and acetate of lead, it also diminishes the amount of secretion. In many instances the treatment must be continued for a considerable time, in order to effect a cure.

Glycerine is equally useful in cases where there is a diminution of the sebaceous secretion, which may lead to pityriasis. In this harsh state of the skin, the softness and natural elasticity may be restored by rubbing glycerine into it. None but a perfectly pure article should be used.—*Ibid.*

*Aqueous Solvent for Sulphur.*—To facilitate the use of sulphur in medicine, many attempts have been made to find an aqueous solvent for the substance, but without success. Dr. Pole, however, now announces that if flowers of sulphur, previously well washed and dried at 212° F., are mixed with an aqueous solution of pure carbonate of soda, and the whole digested at 212° for ten hours, considerable sulphur will be taken up. Linseed oil is another solvent for sulphur, the amount dissolved increasing with the temperature.—*Ibid.*

*The* "Pall Mall Gazette" states that in India cases of leprosy have been cured with carbolic acid, and a recent Madrid paper says that it has been used with success even in very advanced stages of the disease.—*Ibid.*

*Carbolic Acid Ointment.*—The "London Pharmacist" gives the following recipe:

Simple ointment, benzoated, 4 pounds troy;
Carbolic acid, crystalized, 3 ounces, 96 grains.

Liquefy the acid by immersing the vessel containing it in hot water, and when the ointment is about congealing, add the acid, stirring well with a strong wooden spatula. Each drachm contains three grains. This ointment has been of excellent service in treating large superficial wounds, and ulcerating surfaces caused by burns, and in cutaneous eruptions of a parasitic nature.

*Liquor Sedativus.*—This is a combination often prescribed by English physicians in diseases complicated with febrile symptoms:

Tinct. Opii Camphor;
Spts. Æth. Nit. dulc.;
Spts. Mindereri;
Syr. Simpi.;
Aq. Camphore, aa. part. æq.
M. et. ft. solutio. Dose: A teaspoonful.

To increase the therapeutic effect of this mixture, 2 fl. ℥ of tinct. gelsemini, or 1 fl. ℥ of tinct. verat. vir. are often added to four ounces, to meet particular indications.—*Boston Journal of Chemistry.*

*Glycerine Cream.*—This recipe is excellent:

Take of Spermaceti, 4 drachms;
White wax, 1 drachm;
Oil of almonds, 2 troy ounces;
Glycerine, 1 troy ounce.

Melt the spermaceti, wax, and oil together, and when cooling stir in the glycerine and perfume.—*Ibid.*

*Eau de Cologne.*—Competent authorities declare that the excellence of the perfume almost entirely depends upon the purity of the spirit employed as its basis. Spirits made from malt and other materials *not* vinous will never produce Eau de Cologne of

a high character, owing, it is believed, amongst other causes, to the odor of fusel oil in the first and to œnanthic ether in the second. Neroli, without which neither genuine Eau de Cologne nor a good imitation of it can be made, is an essence obtained from orange blossoms (the bitter species, *Citrus bigarradia*), and hundreds of tons of flowers are plucked and consumed for the purpose.—*Ibid.*

*Preserving Anatomical Specimens.*—Dr. Ehrhardt says that the simplest means of preserving anatomical and pathological preparations, is the use of the following solution: Saturated solution of alum, 100 grammes; saltpetre, 2 grammes.

The article to be preserved is immersed in the solution, when it becomes decolorized; but in a few days the color returns, when it is taken out of the solution, and kept in a saturated solution of alum and water only.—*Ibid.*

*New Liquid Fire.*—P. Guyot, in the "Comptes Rendus," gives the following process of making liquid fire. He digests flowers of sulphur in excess with bromine for some time, and then filters the resulting liquid, which analysis shows to be protrobromide of sulphur, through asbestos.

This liquid, when brought into contact with liquid ammonia, appears at first inert, but after a few minutes the mixture boils violently and bursts into flame.—*Ibid.*

*The* editor of the "Manufacturers' Review" has recently analyzed a "simple and harmless antidote for the opium habit," put up in Indiana, and sold at sixteen dollars a bottle, and finds it to be a syrup containing a large amount of sulphate of morphia.—*Ibid.*

*New Chemical Toy.*—Dr. Puscher has published the recipe for a mixture that may serve as a substitute for the so-called "Pharaoh's Serpent." Mix intimately together two parts of bichromate of potassa, one part of nitrate of potassa, and three parts of white sugar. Press the mixture into tin-foil cones, and if it is intended to keep it any time, it must be preserved in air-tight packages.—*Exchange.*

BREVITIES.

Gum tragacanth mucilage can be prepared much more quickly and of a more uniform consistency by first rubbing up the powdered gum with a little glycerine before the water is added; as in this way the formation of lumps is entirely avoided.——— The French and Austrian Governments have begun to raise sponges artificially; the former on the shores of the Mediterranean, and the latter on the coast of Dalmatia, and the cultivation is said to be perfectly successful and very profitable.——— A soda lake has been discovered near the Union Pacific railroad, several miles in circumference, and capable of supplying sixty-five thousand tons of soda annually.———Tincture of guaiacum, half an ounce, and essence of gualtheria, one drachm, added to one pint of cod-liver oil, completely cover the taste of the latter. ———The oleander, so popular as a house and garden plant, is extremely poisonous; nearly fatal results having followed the eating of a few leaves or buds.—*Boston Journal of Chemistry.*

## MISCELLANEOUS.

**"Non omnes eadem mirantur ament que."**

*Dr. Morris on Disinfectants.*—Dr. Moreau Morris recently read an admirable paper on the "Sanitary Care of Contagious Diseases," from which we gather much valuable information. "Contagious or infectious diseases have certain laws of inception, growth and propagation. The elements of which they are composed are, as yet, unknown, but their methods of progression and diffusion are better understood. We know that they have a beginning, and can, in many instances, anticipate and prevent the initiative; if once fairly established, we can control, if not destroy them. By the aid of chemical science we have learned how to arrest, destroy, and transmute into innocuous compounds the germs that propagate disease." Dr. Morris very

justly remarks that the law of self-preservation makes it necessary for the Government to take the measures, to be adopted to prevent disease, into its own hands, and hence the establishment of the Board of Health, and the systematic operations of the sanitary department. It is interesting to hear what measures the sanitary officers have adopted to stop contagion. Dr. Morris says: "The appliances for removing the causes of disease are varied according to the nature of the evil; if there are filthy streets, or accumulation of decomposing matter in cellars, privies, or houses, cleansing and disinfection, or arrest of decomposition, are the means employed. If there is a confined, vitiated atmosphere, openings are made, letting in sunlight and air. In a word, the most important means for securing health and preventing diseases are fresh air and pure water." In the practical application of disinfectants, they are classed into two groups:

1. Disinfectants which arrest fermentation; such as carbolic acid, sulphate of zinc and iron, and sesquichloride of iron.

2. Disinfectants which effect chemical decomposition: Chloride of lime, sesquichloride of iron, chlorine, lime, and sulphurous acid.

"The disinfectants that arrest fermentation are either employed separately or mixed with some one of the same class, depending upon the circumstances in each case. The better qualities of carbolic acid are used for fumigating rooms, disinfecting bedding and clothing, but for basements, cellars, and privies, a seventy per cent. acid is all that is required.

For the disinfection of damp cellars and yards, a concentrated solution of protosulphate of iron, mixed with a low grade of carbolic acid, is employed, and for privies, a solution of sesquichloride of iron of 1.30 specific gravity is used, mixed with ten per cent. of carbolic acid and water. Sulphate of zinc is also found useful in solution with water, or in combination with carbolic acid, for infected clothing and bedding. The formulæ employed are as follows: Sulphate of zinc, 8 ounces;

water, 3 gallons. Or, sulphate of zinc, 8 ounces; carbolic acid, 1 ounce; water, 3 gallons.

"The latter has been found effectual in arresting or destroying the infection upon bedding and clothing in scarlet fever and small-pox, and probably will be found efficient in other contagious fevers.

"*Disinfectants that effect chemical decomposition:* "The fermentation of filth and vegetable germs are destroyed by chloride of lime, and it ought to be liberally employed. Its use in relapsing fever proved invaluable, as likewise with other malignant fevers depending upon filth and foul atmosphere. It is used either in a dry form sprinkled upon the floors, or in solution upon the floors and wood-work of infected rooms. In damp places, to avoid the hygroscopic properties of the lime, carbonate of soda is added. In the cleansing and disinfection of houses and apartments infected with relapsing fever, chlorine gas has been extensively used, and with the best results."

The sanitary officers have also found sulphurous acid a valuable agent for the fumigation of infected rooms and clothing. It arrests fermentation and acts as a deoxidizer. It is used specially in the disinfection of the contagion of small-pox, scarlet and yellow fever, and in skilled hands seems to control these efftucally.

The Metropolitan Disinfecting fluid is highly commended by Dr. Morris as a preparation which has been employed during the past three years for purposes of privy disinfection, and was the result of a thorough scientific experimentation by the officers of the Metropolitan Board of Health.

"Sesquichloride of iron is prepared by dissolving hydrated sesquioxide of iron (bogore) in muriatic acid; to this is added ten per cent. of carbolic acid. This forms the fluid in a concentrated form, and is largely diluted with water at the time of using. Its preparation requires chemical knowledge and involves time, but it is kept for sale at two places in the city, and is thus always available. All-night scavengers are compelled by the Board of Health of New York to use it. Its effects are

compound. The iron checks fermentation, and the chlorine acts as an oxydizing agent. Its carbolic acid also aids in arresting decomposition and fermentation, and the whole combination, therefore, by its chemical action, decomposes the sulphureted hydrogen. Hydrated chloride of aluminum has recently been brought to notice as a disinfectant, but not having yet given it a fair trial, no definite statement of its properties can be given."

Dr. Morris gives an interesting account of the thorough manner in which the sanitary officers accomplish their work; and his paper is one of the most valuable contributions we have recently had, to our knowledge, of the sanitary care of contagious diseases.—*Ex.*

*Remarkable Exertions After a Fatal Gunshot Wound Through the Heart.—By W. H. Kemper, M. D., Muncie, Ind.*—I am induced to report the following case from its interest in a medico-legal point of view. I will add that the transaction was observed by two competent witnesses on the spot.

On the 29th day of August, 1870, an altercation occurred between Simon Bates and Charles Merrill, aged respectively 60 and 23 years; both vigorous men.

While Merrill was standing a few feet distant, and with his left side toward Bates, the latter discharged a pistol at him. Merrill immediately sprang upon Bates, threw him upon the ground, and struck him repeatedly upon the face and top of his head with his fist, inflicting several ugly wounds. During this time, also, Bates was struggling and pounding Merrill over his head and face with the cylinder of the pistol. The length of time during which the struggle ensued was, probably, half a minute, when Bates asked one of the witnesses to take Merrill off. While doing this, Merrill gasped, fell back, and immediately expired.

At the call of the coroner, on the following day, Dr. J. C. Helm and I made a *post mortem* examination of the deceased. The ball entered about the centre of the infra-axillary region, between the seventh and eighth ribs, passed through the lower lobe of the left lung near its inferior border, thence through the

diaphragm, and notching the superior border of the spleen; thence ranging upward through the diaphragm again, passing through the pericardium, thence through the left ventricle and right auricle, and again passing through the pericardium; thence through the middle lobe of the right lung, and lodged beneath the skin, two inches below the right nipple.—*Ex.*

*Treatment of Nocturnal Incontinence of Urine.*—Dr. William Thompson, *apropos* of Dr. Yeo's treatment of this disease, remarks that a case of a girl, aged twelve, recently came under his care, who had been suffering from it for two years. Dr. Thompson thought hydrate of chloral might prove of service, and accordingly ordered her fifteen grains every night on going to bed; to fast from 7 P. M. to the following morning, and to eschew beer and spirits. He did not see her for two days, when her mother informed him she was cured. The very first night she rested well, and did not get up once, instead of four or five times as formerly, besides wetting the bed nightly. She was directed to continue the medicine for a fortnight, decreasing the dose to ten grains. She then discontinued the remedy entirely, and was perfectly well when he last saw her. When the case is one of habit, the chloral acts by insuring the bladder and sphincter vesicæ a quiet night's rest, enabling them in a few days to regain their normal tone, and the patient his wonted vigor, so that he may retire to rest without his former dread of a disturbed night, or of awakening in the morning to find he is a defaulter to the laws of cleanliness and health.— *The American Journal of Syphilography and Dermatology.*

*Treatment of Croup by Inhalation of Glycerine.*—A German physician, Dr. Stehverger, recommends the treatment of croup by the inhalation of pure glycerine through one or other of the well-known forms of atomizing apparatus. He was led to try this remedy for croup from observing its good effects in cases of hoarseness and loss of voice. After application the cough becomes more free and moist, and children are enabled to sleep almost immediately upon being relieved by the inhalation. It

is, however, believed to be of importance to make use of the remedy early and frequently, as, if delayed, it may have no effect whatever. If the glycerine be pure, it may be used unmixed; if not, it should be diluted with a little water. The inhalations are repeated, according to the necessity of the case, at intervals of from half an hour to an hour and a half, and for about fifteen minutes at a time. The effect of the glycerine in this case is supposed to be due to the fact that the secretions of the mucous membrane are thereby increased, and tumefaction reduced.

## Psychological Force—Moral Emotion Subordinating the Pangs of Dissolution.

### THE DEATH OF MARK ANTONY.

"I am dying, Egypt! dying!
Ebbs the crimson life-tide fast,
And the dark Plutonian shadows
Gather on the evening blast.
Let thine arms, oh Queen, support me,
Hush thy sobs, and bow thine ear;
Hearken to the great heart-secrets,
Thou, and thou alone, must hear."

"Though my scarred and veteran legions,
Bear their eagles high no more,
And my wrecked and scattered galleys,
Strew dark Actium's fatal shore—
Though no glittering guards surround me,
Prompt to do their master's will,
I must perish like a Roman,
Die the great Triumvir still."

"Let not Cæsar's servile minions,
Mock the lion thus laid low—
'Twas no foeman's hand that slew him,
'Twas his own that struck the blow.
Hear, then, pillowed on thy bosom
Ere his star fades quite away,
Him who, drunk with thy caresses,
Madly threw the world away."

"Should the base plebeian rabble
Dare assail my fame at Rome,
Where the noble spouse, Octavia,
Weeps within her widowed home,
Seek her, say the Gods have told me,
(Altars, Augurs, circling winds),
That her blood with mine commingled,
Yet shall mount the throne of Kings."

"And for thee, star-eyed Egyptian,
Glorious sorceress of the Nile,
Light the path to Stygian horrors,
With the splendors of thy smile.
Give the Cæsar crowns and arches,
Let his brow the laurel twine,
I can scorn a Senate's triumphs,
Triumphing in love like thine."

"I am dying, Egypt! dying!
Hark, the insulting foemen's cry;
They are coming! quick! my falchion,
Let me front them, ere I die!
Ah! no more amid the battles,
Shall my heart exulting swell.
Isis and Osiris guard thee!
Cleopatre! Rome! Farewell!"

*Darkness in Treatment of Small-Pox.*—Mr. J. H. Waters states, that if a patient, in the beginning of the attack, be put in a room from which absolutely all light is excluded, save that of a candle, the effect is to arrest the disease in the papular or vesicular stage; it never becomes purulent, and the skin between the vesicles is never inflamed or swollen; the liquor sanguinis is prevented from becoming pus; the large scabs of matter never form over the face; there is no intense pain, and only trifling itching, and the smell is either very slight or altogether wanting.—*London Lancet.*

*Carbolic Acid Preparation.*—Mr. T. A. Redwin, in a paper read before the British Pharmaceutical Conference, gives the following as advisable proportions in the use of carbolic acid:

As a rule, it is better to dissolve the crystallized carbolic acid

(Calvert's) in the proportions of one part by weight of the acid to six of glycerine (carbolate of glycerine). In this state it can be diluted equally indefinitely.

In general, a dose of carbolic acid is 1 grain in an ounce of water.

As a gargle, 1 or 2 grains to an ounce of water.

As an injection, 1 grain to 4 ounces of water.

As a lotion, 15 grains to an ounce of water.

As an ointment, 30 grains to an ounce of benzoated lard.

As a liniment, 1 grain to 20 of olive oil.

As a plaster, 1 part of carbolic acid to 3 of shellac.

The crystallized carbolic acid to be used as a caustic.

The carbolate of glycerine, as above, should be used in 1 or 2 drop doses.

Antiseptic oil for abscesses, 1 part of acid to 4 of boiled linseed oil.

Antiseptic putty, 6 spoonsful of the antiseptic oil mixed with common whiting.

Aqueous solution of carbolic acid is 1 part of acid to 40 of water (1 ounce of acid to a quart of hot water well agitated and filtered).

Sick rooms, to disinfect, place a portion of the dissolved acid in a porcelain dish, and float it in a large vessel of hot water.

Disinfecting purposes generally, 1 pound of *crystals* to 6 gallons of water. *Fluid*, 1 part to 80 of water. *Powder*, 1 ounce of crystals with 4 pounds of slaked lime.

For drains, take 1 pound of the fluid carbolic acid to 5 gallons of warm water.

Toothache is often cured with one drop of carbolate of glycerine; and diarrhœa arrested in half an hour with 2 drops.

In all cases of parasitic life it is advisable to commence with very dilute carbolate of glycerine.—*Chemist and Druggist.*

*The Formation of Urea.*—The methods thus far adopted (by Prevost, Dumas, Oppler, Perls, Zalesky, and Grehaut), to prove or disprove the part taken by the kidneys in the formation of urea, are based principally upon the examination of the blood of

the renal vessels passing to or from the kidneys, or that of the general system, with a view to its changeable proportion of urea with retained or extirpated kidneys, or with extirpation of the kidneys with ligation of the ureters. The uncertainty of all the modes of fixing the amount of urea in the blood induced Dr. Rosenstein to adopt a new method for the purpose. He compared the amount of urea in the urine of dogs, with the same food, after the retention of both kidneys, and the extirpation of one. The result was, that where one kidney only was left, the same amount, and generally even more urea was secreted, than where both were retained. As long as this result was obtained only some time after the extirpation of the single kidney, it was convincing, because in the meanwhile the remaining kidney was decidedly enlarged, and an augmented compensatory function through an increase of tissue or of secretory elements might be assumed. Meanwhile Dr. Rosenstein obtained the same result in one animal which before the operation had been put on full diet, and whose desire for food was by no means diminished by the operation. In this case the elimination of the urea, in both the days following the operation, was the same as before, when both kidneys were present. Since in these two days no noticeable increase of size took place in the remaining kidney, it certainly follows that the kidneys do not take part in the formation of urea.—*Centralblatt Medizinischer Wissenschaften*, No. 2,371. *N. Y. Med. Journal.*

*Abortive Treatment of Felons.*—One of the most painful afflictions from which any one can suffer is a felon or whitlow; and as I have had great success in the treatment of these distressing forms of disease, I will, with your permission, give your readers an idea of the method adopted.

It is well known by physicians that pressure causes absorption, and in view of this fact, ten years ago I adopted the plan of applying several coatings of collodion over the finger or place where the pain is felt on its first appearance. On drying, the collodion contracts with an even pressure, and if kept on for twenty-four hours the symptoms will usually entirely disappear.

Of late I have been in the habit of soaking the affected part in quite a strong solution of carbolic acid for a few minutes before applying the collodion.

The pain for some hours will be quite severe, but an anodyne will afford relief. J. H. S., Augusta, Me.

*On Irritable Heart.*—Dr. Da Costa, in speaking of the treatment of irritable heart occurring in soldiers, with hypertrophy, states that no medicine can be compared to aconite. In moderate doses, used for months, a decrease of the enlarged organ happened. In pure irritable heart he recommends digitalis, digitaline, and veratrum viride—the latter stands between aconite and digitalis. Ten drops of the tincture of digitalis were given three times daily, and from 1-60th to 1-30th of a grain of digitaline, to some of his soldier-patients. He is disappointed in gelseminum as a cardiac sedative. In instances of irregular action, belladonna and atropia proved very efficient agents.—*American Journal of the Medical Sciences.*

*A Speedy Cure for Rheumatism.*—Dr. R. Boyd states that he cures inflammatory rheumatism in from three to seven days by the following method: He gives first a full emetic dose of ant. et potass. tart., and when this has operated, five drops of tinct. opii and five drops tinct. colchici every three or four hours, and a teaspoonful of a half-pint mixture, containing ʒ iv. potass. acet. every hour. When the patient becomes very hungry, and is quite free from pain, having fasted several days, he allows two spoonsful of milk or one oyster three times a day, increasing the quantity gradually each day.—*Michigan University Medical Journal.*

*Treatment of Phthisis with Arsenic Acid.*—The dose must be very small, gradually increasing, and occasionally suspended; the treatment is prophylactic. The first 10 days, 0.16 of a grain daily; the second 10 days, one or two tablespoonsful of cod-liver oil daily; the third 10 days, no medicine; then as before. This treatment is to be continued from November to May; besides, the diet must be rich and well regulated.—*Abeille Medicale.*—*Indiana Four.*

*Where Shall we Send our Consumptive Patients?*—Every day the inquiry is made as to what locality on this coast is best adapted for a sanitarium—a place for convalescents, invalids, and consumptives. That no one locality will suit all cases is a palpable truth. An individual threatened with phthisis might find health in the mountains, during the summer, where he might even "camp out" with benefit; or a journey in the saddle, or a sea voyage might restore his health. The same may be said of persons affected with dyspepsia and similar disorders. But delicate females, and consumptive patients in more advanced stages of disease, must seek relief elsewhere. The summer winds of the bay and ocean climate are too chill; the interior is too hot and debilitating. There is a middle region, a narrow district skirting the bay, enjoying a medium climate. It embraces portions of the counties of Marin, Sonoma, Napa, Contra Costa, Alameda, Santa Clara, and San Mateo. But this is so often a battle-ground between the two climates, in which wind and mist on the one hand, and a broiling sun on the other, triumph alternately, that it does not supply the need. In the southern counties of the State is a range of territory some miles inland from the coast, which enjoys a more equable climate, both in summer and in winter. Los Angelos and San Diego are the two most attractive localities in this range, and the inhabitants of each place think their town the most salubrious spot on the globe. San Diego is more exempt from summer heat than Los Angelos, and being nearer the ocean, has a more equable winter temperature. The inhabitants have secured a large stock of thermometers and pluviometers, and have become zealous meteorologists, and determined to demonstrate the unparalleled sanitary virtues of their growing burgh. Thus far San Diego has the lead in the race, and presents the strongest inducements to valetudinarians.—*Pacific Medical and Surgical Journal.*

*Revaccination.*—Mr. Simon, the medical officer of the Privy Council, has recently published an important memorandum on this subject. He believes that, by successful vaccination in in-

fancy, most persons are insured for a lifetime against an attack of small-pox; and that, in the proportional few cases where the protection is less complete, it will, on account of the vaccination, be generally so mild as not to threaten death or disfigurement. There is, unfortunately, a vast amount of imperfect vaccination, and consequently every population contains very many persons who, though nominally vaccinated, are liable to the disease. It is, therefore, advisable that all persons who have been vaccinated in infancy should, as they approach adult life, be revaccinated. The best time for this is when growth is about completing itself, that is, from fifteen to eighteen years of age. If, however, there is prevalence of small-pox in the neighborhood, or if individuals are exceptionally exposed to infection, the age of fifteen should not be waited for, especially in the case of young persons in whom the marks of previous vaccination are unsatisfactory. Revaccination once properly and successfully performed, does not appear ever to require repetition. In proof of this assertion, he states that the nurses and other servants of the small-pox hospital, when they enter the service, are invariably revaccinated; and so perfect is the protection that, though the nurses are in close and constant attendance on the patients, and the other servants are in various ways exposed to the contagion, during thirty-four years there has never been known an instance where any one of them has ever contracted this disease. The Royal College of Physicians of London has sanctioned this report.—*New York Med. Jour.*

*Tin-Foil for Preserving Substances Liable to Change on Exposure to Air.*—Tin reduced to thin sheets has for many years been employed for preserving a great number of substances from the action of air and moisture. The thin leaves (foil) of this metal are essentially repellant to moisture. When cemented to the surface of damp walls, they protect the paper-hangings which may be afterwards applied, and they are in like manner used for lining the interior of boxes and drawers in which dried medical leaves and flowers are kept. It has long been the practice to enclose chocolate in tin-foil, to prevent the fatty matter

contained in it from soiling the paper which forms the outside wrapper; in the same way butter of cacao itself is preserved, and some sorts of sweetmeats, sausages, and cheese are among the articles similarly protected. Tobacco-pouches are lined with tin-foil to preserve the flavor and humidity of tobacco. Cakes of opium are kept in a moist and uniform state by wrapping them in this material, and bisulphate of soda is kept in the same way, for use in making artificial Seltzer water with Briet's apparatus. Lastly, on account of the opacity of tin-foil to the rays of light, bottles are coated with it for the purpose of excluding light from vegetable substances which would be injured by its action.

Notwithstanding the knowledge of these facts, it might be said that the application of tin-foil for the preservation of substances liable to change is still rather limited, and there seemed to be a prospect of its admitting of a more general use than has hitherto been made of it. At the same time there was an absence of any precise experiments for the purpose of determining in a scientific manner the degree of impenetrability of tin-foil. Having been engaged for some time in the investigation of this subject, I have obtained the following results:

"For many years past I have observed that cacao butter, which readily becomes rancid even when kept in bottles into which it has been introduced in the melted state, if the bottles be opened from time to time, does not undergo the same change when moulded in tablets and wrapped in tin-foil. This fact, which was confirmed by many observations, and could only be explained by assuming the impenetrability of tin-foil to atmospheric air, formed the starting point for some experiments in the same direction, which proved satisfactory. Thus, a piece of well-burned quicklime, enclosed in a double wrapper of tin-foil, was exposed to the atmosphere of the laboratory by the side of another similar piece which was exposed without protection. While the latter became slacked, that which was protected by the tin-foil, and weighed 92.2 grains on the 1st of December, 1867, had only gained three decigrammes in weight at the expi-

ration of one month, and after being kept until the 25th of March, 1868, it had only increased to 94 grammes. It had thus gained only 1.8 grammes in four months. On being then taken out of its metallic envelope much heat was developed from absorption of moisture, and it fell into powder.

"Satisfied by this experiment of the efficacy of tin-foil for preserving bodies from the action of air and moisture, it seemed probable that substances the most susceptible of change might be kept in the same way. It was found that substances so deliquescent as chloride of calcium and liver of sulphur, and efflorescent salts, such as carbonate and sulphate of soda, remained almost unchanged when wrapped in tin-foil, increasing or diminishing only to a few thousandths of their weight in several weeks.

"Other experiments were made of a more precise character. It is well known that fresh lemons become rapidly dried and ultimately hard when exposed to the air, and they also become parched and covered with mould. I had endeavored to prevent this drying and moulding by placing the lemons in close vessels, in dry air, in sand, and also in bran; but none of these methods proved efficacious. Thus far, for example, in twenty-one days the lemons lost, on average, 17.33 per cent. of their weight in sand, and 17.33 in bran. Experiments were made for the purpose of ascertaining the effect of enveloping the fruit in tin-foil, and also of coating it with a film of collodion. Some of the fruit prepared in each way, and some unprepared, was weighed, exposed to the air, and again weighed at intervals of a month. The fruit covered with tin-foil is perfectly preserved; that covered with collodion is not preserved.

It should be known to every physician that lead-foil is frequently substituted for tin-foil, and when this is done, the material so preserved is always rendered more or less poisonous.—*Scientific American.*

*Artificial Ivory.*—In a large show-case at the fair of the American Institute we saw some billiard-balls, rings, brooches, knife-handles, and other objects resembling ivory, which, upon

close inspection, proved to be made of gun-cotton. Here was the application of Schönbein's discovery that the original inventor could never have anticipated. The solubility of gun-cotton in a mixture of alcohol and ether has long been known, but that a tincture of camphor would produce the same effect has not been suspected until recently. It now appears that moist camphor and cotton pulp are mixed together, and put under an hydraulic press, when the mass so closely resembles ivory that it can be made into billiard-balls, buttons, and, in fact, everything for which ivory is employed. The cotton can be colored without injury to its texture. It is a curious fact that the vapor of camphor decomposes gun-cotton with evolution of red fumes—in fact, the cotton is decomposed explosively. What the action of the camphor is on the gun-cotton has not been explained. It would appear as though the nitrogen of the pyroxyline was expelled by it in the form of binoxide, and this, in turn, took oxygen from the air, and became nitrous acid. The matter is worthy of investigation, as perhaps offering important applications in the arts.—*Sci. Amer.*

"*Rapidity of Mental Transmission in a Nerve.*—Professor Heimholtz has made some new measurements on the rapidity at which excitation is propagated along the motor nerves of man from the brain to the muscles. The ascertained rapidity of the excitation varies between 250 and 292 feet per second, and the rapidity is also found to be greater in summer than in winter. This result led us to a more exact observation of the influence of temperature, which is ascertained by the artificial cooling or warming of the arm. By this means the accelerating influence of a higher temperature has been clearly determined, so that the interval of time between an impulse of the voluntary power and the corresponding movement of the muscles is less in summer than in winter.—*Med. and Surg. Reporter.*

*Iron and Hydrogen.—Dr. Klein.*—The author, a pupil and collaborator of Professor Jacobi, of St. Petersburg, states that the iron obtained by electrolysis is not, as has been often

thought, the pure metal, but, on the contrary, is a compound or mixture of iron and hydrogen, which, when heated to redness, gives off an enormous amount of that gas, and becomes, while greatly increasing in bulk, a silver-white, very soft, ductile, and malleable metal, which decomposes water readily below its boiling point and oxidizes most rapidly.—*Les Mondes and Chem. News.*

*Production of Bone from the Medulla.*—An interesting "provisional communication" appears in No. 24 of the *Centralblatt*, from the pen of M. Baikow, on the effects of transplantation of medulla. M. Baikow made two series of experiments. In one set, which were thirty-eight in number, the medulla of the femur or tibia of a dog, was placed under the skin, of the back of another dog; while in a second set, twenty-eight in number, the marrow was inserted beneath the skin of the back of the same individual. The first set of experiments all failed; bone was formed in none. In the second set fourteen cases succeeded, *i. e.*, bone was actually formed; while the remaining six cases were unsuccessful. In the fourteen successful cases bony masses were found in various stages of development, from the earliest rudiments to complete formation, with Haversian canals, lamellæ, stellate lacunæ, and medullary cavities filled with medulla. Up to the present time, M. Baikow's experiments extended only to the seventy-sixth day. In one case, at the sixty-first day, was not only complete bone present, but fibro-cartilage. The results of examinations showed that the medulla, after transplantation, first passed into the condition of fibrous tissue, from which, by the proliferation of the cellular elements, bone or cartilage was developed. M. Baikow's results are in opposition to those of M. Ollier, but corroborate those of M. Goujon.—*Lancet*, July 16th, *Abstract.*

*Results of Capital Operations before and after Employment of Anæsthetics.*—In the pursuit of his studies on the benfits resulting from the employment of anæsthetics, Mr. Simonin has established a comparison of the results of capital operations per-

formed by him before the employment of anæsthetic agents, and those performed under their influence. As the author remarks, the use anæsthetic agents commenced at a period already too remote for the great majority of operators to be able to establish these comparisons from their own practic. On this point M. Simonin has the advantage of being able to offer two comparative series from his own practice at the Nancy Hospital, extending over thirty-four years.

The author takes into consideration only the large operations. The first series, from 1835 to 1847, includes 107 operations performed without the use of anæsthetics. The second, from 1847 to 1869, includes 229 operations performed under the influence of anæsthetics.

We will quote the most important table.

In amputations of the thigh, the first series, without anæsthesia, gives 4 deaths out of 7 operations, or a mortality of 57 per cent.; the second series, with anæsthesia, gives 8 deaths out of 23 operations; that is to say, 25 per cent. of fatal cases.

In amputations of the leg, the first series gives a mortality of 45 per cent., the second series 21 per cent.

The amputations of the arm present a mortality of 25 per cent. in the first series, and of 21 per cent. in the second.

In cases of strangulated hernia the results are still more striking: thus, before the employment of anæsthetics the mortality was 36 per cent., since their employment it has descended to 10 per cent.

Operations for the removal of tumors, and amputation of the fingers and toes, present no very marked differences in the results.

One will probably object to these statistics that their extent is too restricted, and one might also point out the progress made in the accessory treatment of patients who are operated on. But one must allow that the results in themselves are very significant, and that they have been confirmed by military statistics. The quantity of results in the latter case seems to have been composed by the unity of the field observation, and one of the means

for multiplying the observations which make up statistical information will be follow the example set by M. Simonin.—*Gazette Hebdomadaire.*

*Shoulder-tip Pain in Hepatic Disease.*—In a most elaborate paper on the shoulder-tip pain and other sympathetic pains in diseases of the liver, read at the meeting of the British Medical Association in August last, by Dr. Embleton, the learned author advances a new explanation of the nervous connection between the liver and the top of the shoulder. First stating that according to his experience, the shoulder pain occurs much more frequently than is supposed by some writers, he remarks that it is "referred especially to the angular space between the acromial end of the spine of the scapula and the adjacent end of the clavicle, where the upper and outer part of the trapezius muscle, as it goes to be inserted into the bones just named, is lodged;" and adds:

At this part, the external branch of the spinal accessory nerve, after having supplied the sterno-cleido-mastoid, and anastomosed with the second and third cervical nerves, enters the trapezius, forming a small plexus with twigs of the third and fourth cervical nerves, and is continued on along the vertebral border of the scapula, supplying the trapezius in its course, and communicating with twigs of the intercostal nerves.

It is noticed that this pain, when severe, extends from the shoulder-tip downwards to the lower angle of the scapula, and occasionally upwards along the side of neck to the base of the skull, following the external branch of the spinal accessory nerve, which in such cases will be found tender to pressure, as will the pneumogastric nerve of the same side. Pressure upon either of these nerves will sometimes aggravate the shoulder-tip pain, and, upon the vagus, will excite or increase pain in the liver.

It appears that the par vagum, accompanied or not by the spinal accessory, does reach the liver, either directly from the gastric branches themselves, or indirectly from them through the great sympathetic ganglia.

The whole question of so-called sympathy between the dis-

tant parts is one of much physiological interest, and every research is of value which tends to remove it from the domain of "vital mystery" and to confirm the law that sympathetic pain indicates nervous continuity.—*N. Y. Med. Gaz.*

*Lead-Pencil Drawings, Tracings, and Writing, and also Charcoal and Chalk Drawings, Fixed.*—W. Wolanek states that when the paper containing drawings or writings made with a lead pencil or charcoal is painted over, on the reverse side (where no writing or drawing exists), with a moderately strong solution of bleached shellac in alcohol, the drawings or writings made with lead-pencil, etc., becomes thoroughly fixed, so that they cannot be rubbed off.—*Polytech. Jour. and Chem News.*

*Cure for Toothache.*—Dr. Henry T. Reyonlds, of Baltimore, writes to us that "for eighteen months I have been using acetate of lead as a remedy for what Burns calls the 'hell of all diseases'; toothache. I find it to act better than any of the numerous remedies proposed in the books, and in cases in which it is applicable the relief is instantaneous. Let the patient apply from one to three grains to the cavity for a moment or two, then spit it out. It fails in fewer cases than any remedy that I have tried —not more than eight per cent."—*Med. News.*

*Digitalis in Uterine Hæmorrhage.*—In a discussion in the Boston Gynæcological Society (*Journal* for January), several members recommended digitalis in hæmorrhage following abortion and parturition, as superior to any other remedy. The dose given is ten or fifteen drops every four hours. Cannabis indica was also highly lauded for the same purpose.

*Nitrated Charcoal for the Actual Cautery.*—Dr. H. Storer (*Journal Gynæcological Society*) recommends, for the actual cautery, nitre and charcoal finely powered and made into a pencil with mucilage. The proportion of nitre must not be too great, or the result will be a pyrotechnic display.

In the Museum at Cassel, Germany, is a library made from five hundred European trees. The back of each volume is formed of the bark of a tree, the sides of the perfect wood, the top of

young wood, and the bottom of old. When opened, the book is found to be a box, containing the flower, seed, fruit and leaves of the tree, either dried or imitated in wax.———"The Medical Record" gives an account of an interesting case of intussusception cured by the persistent injection of salt and water. The introduction of air was abandoned after a second trial, on account of the pain it caused.———*Wash for Chilblains.*—Sulphurous acid, three parts; glycerine, one part; and water, one part. The acid will be found particularly useful in the irritating stage of chilblains.—*Cin. Med. Repertory.*———A mixture of powdered soapstone, two parts, and calomel, one part, is said to be an excellent application for the chafed skin of infants. Dry calomel is also recommended for hæmorrhoids, to relieve congestion and pain.—*Pacific Med. and Surg. Jour.*———Dr. Storer, in the "Gynæcological Journal," says that there is a physician in Boston whose patients have frequently come into his hands with more or less complete obliteration of the vagina from the careless use of the nitrate of silver. Cases of a similar character he believes to be common. Other physicians have reported similar cases.—*Ex.*———*Local Anæsthesia.*—Dr. C. D. Hadway, of Jerseyville, Ill., recommends carbolic acid for this purpose. He uses the crystal in a state of deliquescence, full strength.—*Med. Archives.*———Dr. E. Andrews, of Chicago, recently cured a varicose ulcer of fifteen years' standing, by injecting into the veins the tincture of chloride of iron. He afterwards dressed the ulcer with carbolated cerate—carbolic acid, grains 18 to adipis, oz, 1.———Replanting teeth is said to be a success in the hands of many dentists. The teeth are extracted, cleaned, and put back, and held forcibly in place for a month.—*Dental Times.*———Dr. Edward R. Squibb, in the "New York Medical Journal," says that the danger arising from anæsthetics is in direct ratio to the rapidity and potency of their action. Any drug that can produce anæsthesia, being capable of producing death.

# MEDICAL NEWS.

'Nulla dies sine linea."

Bismuth has been discovered in Texas. This metal is somewhat rare. It is used as a component of britania-ware, and its use as a subnitrate or subcarbonate in medicine is yearly becoming more extensive. It is used also as a face powder. Faces that have been treated in this way have a yellowish, leathery appearance.—*R. A. Roessler, in Journal of App. Chem.* ———*Bussine.*—This is the name of an alkaloid made from the leaves and root of boxwood, by M. Pavia, of Italy. He regards it as a substitute for quinine.—*Lancet.*———*Paris Green.*—The extraordinary demand for this substance, as a potato-bug poison, has not only raised its price to an unexampled extent, but has led to numerous sophistications and imitations of the genuine article. It is remarkable, if the experience of numerous experimenters is to be trusted, that neither arsenious acid nor copper is capable of effecting the destruction of potato bugs, while this compound (arsenite of copper) is very efficacious.——— Dr. R. A. Vance, in the "N. Y. Medical Journal," recommends the use of the ophthalmoscope in directing the treatment of epilepsy. If the instrument reveals an anæmic condition of the cerebral vessels, give strychnia to the patient; if congestion exist, give the bromide of potassium. More generally those patients that have their paroxysms at night require strychnia.—*Ex.*———Dr. Liebreich, of Paris, regarded as the leading oculist of Europe, has been appointed Ophthalmic Surgeon and Lecturer to the London Hospital. The "Lancet" objects to the appointment because Liebriech is a German.---*Ex.*———The Chicago Microscopical Society recently held a public meeting, at which there was an attendance of fifteen hundred persons. One hundred instruments were exhibited, valued in the aggregate at $30,000. There were in the hall twenty-two tables, where the owners of the instruments stood ready to exhibit their preparations.—*Harper's Weekly.*———Cats and dogs are proved

to be insusceptible of the vaccine disease.—*Ex.*———More than three hundred dead children are found in the streets of London every year.—*Ex.*———The Liebig Extract of Meat Company slaughtered 88,869 head of cattle last year.—*Ex.*——Gun-cotton is manufactured in England to the amount of one hundred tons per annum.—*Ex.*———The deaths from yellow fever in Buenos Ayres, during the recent epidemic, are estimated at 26,000.—*Ex.*———The sale of the carbonated waters, to be drank in the shop of the pharmacist, is strictly forbidden in Prussia.———*Starvation in London.*—Within the last three years 140 persons have been registered in London as dying from starvation.———*An Old Mother.*—Mrs. Betsy Hudson, of Warren, Pa., aged 65 years, recently presented her husband with a plump, healthy baby.———Newfoundland cod-liver oil has gone up in price lately, owing to the immense demand for it in Europe; and now it is sold to the merchant at the rate of $1.30 a gallon. Last year 330 tons of it were exported, the value being $260 per tun. Of the common cod oil, unrefined, 4,521 tuns were exported, the value being $144 per tun.—*Ex.*——The first account of croup in the English language, by this name, is to be found in a letter from Dr. Patrick Blair, of Cupar Angus, to the celebrated Dr. Mead, of London, dated July 6th, 1713.———The oldest man in the world has just died in Poland. He was named Semen, and lived in Padolia, on the estate of the Princess Cretwertinska. He recounted the events of 1767, when he was a soldier. He had just entered his 139th year.——*Death of Dr. Hyde Salter.*—Dr. Salter, the well-known author, died very recently, at his home in London, at the age of 47. He fell a victim to the disease on which he wrote so ably, and to which he had long been subject—asthma.———*A Novel Case.*—A case was read at a late meeting of the Obstetrical Society of London, reported by Dr. Routh, in which a child born in the twenty-second week of gestation, lived eighteen days.———Sir Thos. Watson is revising his lectures on the practice of physic. It is stated by the *Brit. Med. Journal* that the last pages are in the hands of the printer. So that the work may be looked for

almost immediately.———*Lancing the Gums in Difficult Dentition.*—Dr. Hatch, of Sacramento, Cal., recently reported four case of fatal hæmorrhage from lancing the gums in children who were already diseased, and who had taken calomel.———*Contraction of Heart and Arteries.*—In the Hastings Prize Essay, Dr. Fothergill teaches us that, in cases of poisoning by digitalis, the heart and arteries alike contract to an extent proportioned to the dose given.———*Severe Medical Examination in London.*—Out of sixty-eight candidates who presented themselves before the Royal College of Surgeons, England, in May last, twenty-seven were rejected.———*Extirpation of the Kidney.*—Prof. Simon, of Prussia, has successfully extirpated the left kidney entire, from a lady residing in Savannah, Georgia. This makes the *third* operation of the kind that Prof. Simon has performed successfully.———*The Successor of Niemeyer.*—The chair vacated by the death of Prof. Niemeyer, of Tubingen, is filled by the election of Prof. Leibermeister, of Zurich.———*The Vienna Medical School.*—About two thousand persons, including between fifty and sixty American physicians, annually attend the lectures of the one hundred professors and assistants of the Vienna School of Medicine.———*The Administration of Chloroform.*—According to the London correspondent of the "American Practitioner," chloroform is universally the anæsthetic used in the London Hospitals. To his inquiries about ether, it was answered that only as a local anæsthetic was it ever used ———*Future Parisian Subjects for Dissection.*—A French journal says that a society has been formed in Paris, now numbering more than a hundred members, each of whom declare that it is his wish that his body, after death, be used for the promotion of anatomical science.———*Roman Life.*—The tables of Ulpianus show that the mean term of Roman life was thirty years. This was the average lenghth of life at the commencement of the Christian era.———*Cases of Ovariotomy.*—Of the 100 cases of ovariotomy reported by Mr. Thomas Keith, of Edinburgh, 81 recovered. In the first 50 the mortality was 22 per cent.; in the last 50 it was only 16. He remarks that the

larger portion of those who died were poor, worn-out women. If there had been an earlier operation in some of them, he says the mortality would undoubtedly have been much lower. Washington L. Atlee, M. D., of Philadelphia, the successful American ovariotomist, ("Am. Jour. Med. Sciences"), publishes six more cases of ovariotomy. His recorded cases now amount to two hundred and nineteen.———*Female Medical Students.*—The English journals announce that on July 18th the lecturers at Surgeons' Hall, Edinburg, resolved, by a majority, to rescind the resolution adopted last year permitting lectures to be delivered to female as well as male students. The lecturers are therefore, prohibited from giving instruction to female students. The corporation of the University of Vermont has voted to admit women to that institution, under rules to be hereafter prescribed by the Faculty.———*Honors to Medical Men.*—Queen Victoria has just conferred the rank of Knighthood on Mr. Paget, the distinguished surgeon. The Emperor of Germany has testified his appreciation of the valuable services rendered by the medical profession during the late war, by bestowing numerous decorations on both military and civi l surgeons. Among others we notice that Prof. Billroth has received the iron cross and Dr. Frerichs the iron crown. M. Ricord and M. Demarquay have been respectively promoted to the grades of Grand Officer and Commander of the Legion of Honor, as a recognition of their services during the siege of Paris.

## EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

### CHICAGO.

In the great fire at Chicago the Rush Medical College was entirely consumed. The exercises have, however, been resumed in the Cook County Hospital rooms, generously placed at the

command of the Rush Medical College Faculty by the county authorities. The Louisville Medical College offered gratuitous tickets to all medical students who suffered at Chicago by the burning of the Institution at which they were then in attendance. This offer has been already embraced, and more students signify their intention to be here. The Rush Medical College Faculty will rebuild their Institution, and make it in future, as it has been in times past, an ornament and credit to their city. They have the earnest sympathy and sincere good wishes of all physicians, who can feel deeply the trials and troubles of their brethren. The Chicago Medical College was uninjured. The physicians of the city suffered severely, not only in the destruction of their accumulated gains, but in the loss of their remunerative practice. Mercantile, commercial, bank, and marine circles are all at this time remembered, and relieved; but who relieves the hard worked, ruined practitioners? They have given thousands in charity; who remembers them now in the hour of their desolation and ruin? This is a part of physicians' hard lot in life. They are the daily almoners of the poor and destitute, but in their own poverty they are forgotten! Were their charities given in speculation, as seed dropped for the harvest hour, they would all be ruined; but when their charities are given, as they are given, in recognition of the veritable anxiom, "It is better to give than to receive," physicians are not unrewarded; they have their reward; for surely the memories of life-long gifts to the sick and indigent poor are infinitely more welcome than gratitude over the receipt of even munificent pensions. Is not the memory of kindness conferred for more welcome than the consciousness of charity received?

The physicians of Chicago have even before the fire had much of reward. Will the thousands then aided forget them now?

There is an interesting and very welcome reflection in connection with this fire. When Charleston and Columbia, S. C., were in flames; when poor, helpless widows and mourning, ruined orphans were fleeing for their lives; seeking safety,

shelter, aye, even bread, those were gala days in Chicago; there were bonfires and illuminations; military bands, with their blaring trumpets and exultant drums, were welcomed and cheered through the streets of that rejoicing city. What has been the recent chapter in American history? When that once beautiful and proud city of the lakes was wrapped in the gorgeous and fatal drapery of fire; when this modern city of the plains, like those of biblical memory, was being consumed by the fiery monster, whose lurid folds enwrapped and embraced it, does it appear that in the cities of the South there were retributive bonfires and rejoicings; that when the widow and the orphan were houseless and homeless, there were thousands exulting over their misery and ruin? No! a thousand times no! thanks be to God be it recorded here, that while these thousands at the South, even at that awful hour for Chicago, were being trampled upon, derided and persecuted, history can not point to a single place, or a single hour, when the agonies of the people of Illinois were made the occasion for feasting and festivity; for rejoicing, and for the display of those manifold exhibitions which bespeak the pleasure and gratification of an exultant people. On the contrary, the poor and destitute of the South sent on to Chicago portions of their daily bread; moieties saved from an enforced and bitter frugality. There has been no exultation; no rejoicing. There has been but one feeling; sympathy for a stricken multitude; anxiety to relieve their destitution; determination to put an end to their wants. It is a beautiful chapter in history. It is worthy of a permanent record.

## BOOKS AND PAMPHLETS RECEIVED.

**The Detection of Criminal Abortion; by Ely Vande Warker, M. D., of Syracuse, Y. Y. James Cambell, Publishers, Boston, Mass., 1871.**

**Twenty-Second Annual Announcement of The Womans' Medical College of Pennsylvania, 1871-72.**

**Bromides: Their Physiological effects; by Robert Bartholow, A. M., M. D. Sidney S. Rider & Brothers, Providence, R. I., 1871.**

The Modern Operation for Cataract; by Hacket Derby, M. D., Boston, 1871.

Womans' Medical College of the New York Infirmary, 128 2nd Ave., N. Y., 1871.

American Association for the cure of Inebriates. Proceedings of the first Meeting Held in New York, 1871.

Medical Ethics and Medical Dissensions; by Charles A. Robertson, A. M., M. D., Albany, N. Y., 1871.

Social Science Association of Philadelphia; by John S. Parry, M. D., Philadelphia, Pa., 1871.

Fœticide or Criminal Abortion; by Hugh L. Hodge, M. D. Lindsay & Blakiston, Philadelphia, Pa, 1869.

A Case of Skin Grafting; by John W. Trader, M. D., St. Louis Mo.

New York State Inebriate Asylum, Binghamton, N. Y. Annual Report of Physcian and Superintendent, for the Year 1870.

Annual Announcement of the Medical Department of the University of Buffalo for the Session 1871-72.

Clinical Report of the Rotunda Lying-in Hospital for the year ending Nov. 5th, 1870; by George Johnston, M. D., Dublin, 1871.

The "Fibrinous Crasis"; by Rollin R Gregg, M D., Buffalo N. Y., 1871.

Evangelical Educational Society of the Protestant Episcopal Church, Philadelphia, Pa.

Standard Supply Table of the Medical Department of the United States, 1871.

Annual Announcement of the Trustees and Faculty of the Medical College of South Carolina. Session 1871-2. Charleston, S. C.

University of Maryland: Sixty fourth Annual Circular of the School of Medicine. Session 1871-72. Baltimore, Md., 1871.

Louisville Water Company's Report for the year ending December, 31st, 1870.

Medical College of Ohio: Fifty-first Annual Circular, 1871.

Comments of the Medical Press on the Alleged Malpractice Suit of Walsh vs. Sayre, New York, 1871.

Announcement of the Medical College of Evansville, Ind. Session 1871-72.

Third Annual Announcement of the Kansas City College of Physicians and Surgeons. Session 1871-72.

The Second Armada. A Reply to The German Conquest of England in 1875. and Battle of Dorking; published by Porter & Coates, Philadelphia, Pa., 1871.

Report of the Delegate of the Fulton County Medical Society, Atlanta, Ga., 1871.

Objections to the Term "Purpuraemia," etc.; by R. F. Michel, M. D., of Montgomery; Ala., 1871

Report of Mutual Life Insurance Company of Hartford, Conn., 1871.

Sixty-fourth Annual Circular of the University of Maryland. Session 1871-2.

A Review of Darwin's Theory of the Origin and Development of Man; by James B. Hunter, M D.; D. Appleton & Co., New York, 1871.

Catalogue of the Officers and Students in Cleveland Medical College, and Announcement for Session 1871-2.

Historical Memoranda Relative to the Discovery of Etherization; by W. T. G. Morton, M., D., Boston, 1871.

Forty-seventh Annual Announcement of the Jefferson Medical College, of Philadelphia, Pa. Session 1871-72.

Transactions of Eighteenth Annual Meeting of the Medical Society of North Carolina. 1871. Raleigh, N. C.

Headaches: Their causes and their cure; by Henry G. Wright, M. D., M. R. C. S. L., L. S. A.; Lindsay & Blakiston, Philadelphia, Pa., 1871.

The Functions and Disorders of the Reproductive Organs; by William Acton, M. R. C. S. Lindsay & Blakiston, Philadelphia, Pa., 1871.

Medical College of Alabama at Mobile. Session of 1871-72, Mobile, 1871.

Draft of the New Constitution of the Medical Association of the State of Alabama. Reported by Jerome Cochran, M. D. To the Session of 1871.

Sarcomatous Fibroma of Upper Jaw (epulis?) By R. A. Kinloch, M. D., Charleston, S. C. 1870.

Transactions of the Eighteenth Annual Meeting of the Medical Society of the State of North Carolina. Raleigh, N. C. 1871.

The Physical Diagnosis of Brain Disease; R. A. Vance, M. D.; Wm. Baldwin & Co., New York, 1871.

Annual Report of Quarantine Operations in Charleston Harbor, S. C. for the year ending October 31st, 1870; by Robert Lebby, M. D., 1871.

Comments of the Medical Press on the Alleged Malpractice Suit of Walsh vs. Sayre. New York, 1871.

A Report on the Progress of Surgery made to the St. Louis Medical Society; by E. A. Clark, M. D., St. Louis, 1871.

The United States Patent Law; by Munn & Co., New York, 1871.

W. B. Keen & Cook's Classified Price List, Chicago, Illinois, 1871.

Transactions of the Indiana State Medical Society, 1871.

On Sudden Death soon after Parturition; by Thomas More Madden, M. D., M. R. I. A., Dublin. Wm. Baldwin & Co., New York, 1871.

Announcement of the Medical College of Evansville. Session of 1871-2. Evansville, Ind., 1871.

T. Trosseau's Clinical Medicine. Vol. IX. 1871; by A. Trosseau. Lindsay & Blakiston, Philadelphia, Pa.

A System of Medicine. Vol. III. By J. Russell Reynolds; J. B. Lippincott & Co., Philadelphia, 1871.

Odd Hours of a Physcian; by John Darby. J. B. Lippincott & Co., Phil., 1871.

The Teeth, and How to Save Them; by L. P. Meredith, M. D., D. D. S. J. B. Lippincott & Co., Philadelphia, 1871.

The Management of Infancy; by Andrew Combe, M. D. D. Appleton & Co., New York, 1871.

West on Nervous Disorders; by Charles West. Henry C. Lea, Phil., 1871.

Restorative Medicine; by Thomas King Chambers. H. C. Lea, Phil., 1871.

Hamilton on Fractures and Dislocations; by Frank H. Hamilton, A. M., M. D., L.L.D. Henry C. Lea, Philadelphia, 1871.

The Northern Pacific Railroad; its Route, Resources, Progress and Business. Issued by Jay Cook & Co.

Theriaki and their Last Dose; by Dr. Samuel E. Collins, Chicago, Illinois, 1870.

Diseases of the Womb; by H. E. Gartillon, M. D. James Campbell, Publisher, Boston, 1871.

Obstetric Report of the Charity Hospital of the Faculty of the University of Louisiana. Session 1870-1; by James James, Jr., M. D. George Ellis & Bro., Publishers, New Orleans, La., 1871.

Tenth Annual Report of the Alabama Insane Asylum, October, 1870, Montgomery, Ala.

Last Illness of Dr. Alden March.' A Criticism on the Management of his Case; by Charles Robertson, A. M., M. D. Published by D. Appleton & Co., New York, 1870.

Bellevue Hospital Medical College City of New York. Annual Circular and Catalogne of 1871-72.

Annual Circular and Catalogue of the Washington University Medical, Department, Baltimore, Md, 1871.

On Syphilitic Epilepsy; by R. A Vance, M. D, New York, 1871.

Physicians' Prescription Book; by Jonathan Pereira, M. D. Lindsay & Blakiston, Philadelphia, Pa., 1871.

Handy-Book of the Treatment of Womens and Childrens' Diseases; by Dr. Dellnberger. Lindsay & Blakiston, Philadelphia, Pa, 1871.

A Manual of Midwifery; by Alfred Meadows, M. D. Lindsay & Blakiston, Philadelphia, Pa., 1871.

Second Annual Announcement of the Medical Department of Iowa State University, at Iowa City, 1871-72.

Twenty-sixth Annual Announcement Ohio College of Dental Surgery, Cin., O.

Artificial Induction of Labor in Uræmia; by Samuel C. Busey, M. D., Washington, D. C., 1871.

Emergencies, and how to treat them; by Joseph Howe, M. D. D. Appleton & Co., New York, 1871.

Practical Therapeutics; by Edward John Waring, M. D., F. L. S. Lindsay & Blakiston, Philadelphia, Pa., 1871.

THE RICHMOND AND LOUISVILLE

# MEDICAL JOURNAL.

VOL. XII. DECEMBER, 1871. No. 6.

## ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—THE THERAPEUTIC ACTION OF DIGITALIS.—A Highly Interesting and Instructive Discourse Delivered by Professor LOUIS TRAUBE, the Celebrated Clinician, at a Recent Meeting of the Medical Society of Berlin, on the Therapeutic Action of Digitalis, Particularly as Applied to Cardiac Diseases. Translated by RICHARD C. BRANDEIS, M. D., (of Louisville, Ky.,) at Vienna, Austria.

Digitalis has proved beneficial in two different classes of affections—namely, in febrile inflammations and in diseases of the heart. I will occupy myself to-day with the application of the remedy in cardiac diseases.

It is not necessary to observe very many cases of organic heart disease to become convinced that these affections are divisible into several well-marked groups. On one hand we see patients who, to all appearances, are free from all disease, and who are apparently capable of meeting every emergency as well as an entirely normal patient. On the other hand we find some who, afflicted by the same affection, are confined to their room and bed, and are prey to the greatest sufferings. Between these two groups we find a third, with cardiac disturbances, who, though complaining of certain disagreeable symptoms, still live with some degree of comfort. This observation has led me to

separate organic cardiac diseases into compensating, non-compensating, and partially compensating. Disorders of compensation exist in those diseases in which a number of intense abnormal phenomena—such as dropsy, cyanosis, enlargement of liver and spleen—occur. At the same time the urine of high specific gravity, slight in quantity, gives deposits of urate salts, and often contains albumen and hyaline casts. The patients complain of muscular weakness and dyspnoea, which latter often appears in form of asthmatic attacks.

What can be the explanation of these phenomena? Every valvular disturbance diminishes, as I have proven, the power of the heart muscles, by which an increased tension of the venous system and a diminished tension of the arterial system is produced. The hypertrophy of the ventricles which ensues is now capable of increasing the powers of the same and of counterbalancing the above-mentioned changes in the circulatory apparatus. A ventricular hypertrophy compensates, therefore, for those alterations which were caused by the valvular disturbances. If the fact of compensation shows itself in this manner, we call that condition a failure of compensation, in which the hypertrophy is either absent or insufficient or has ceased to act in a compensatory manner. The compensatory disturbances may be divided into different classes, according to the condition of the radial arteries, which, being the most accessible to palpation, may be considered as the representatives of the arterial system. In one class of cases the radial arteries are small and but moderately tense, in another we find them very tense, and in a third class we also find symptoms of abnormal tension in the pulmonary arterial system. The cases of cardiac lesions in which, when in the stage of compensatory action, the tension of the aortic system is abnormally increased, are the least known, although of the greatest possible importance in regard to the determination of the action of digitalis. To give you an example of this condition, let us imagine a patient suffering from renal disease, in whom, after a diffuse nephritis, symptoms of hypertrophy of the left ventricle make their appearance. The

patient is quite comfortable, although besides the nephritis, the symptoms of ventricular hypertrophy are quite marked. Suddenly asthmatic disturbances set in, and coïncident with these we have the beginning of compensatory disturbances, in which the above-described symptoms may show themselves at their very best. The peculiarity of this case, the abnormal tension of the aortic system, is especially well marked. There are other cases similar to this, but the entire class has this in common, that the exciting cause is found in the resistance of the peripheric aortic system. Digitalis often fails to have a beneficial effect in these cases, and sometimes is even injurious.

Owing to the practical importance of this circumstance I will add a few remarks upon it. If we should give digitalis to a patient who presents the evidences of compensatory disturbances, such as cyanosis, dropsy, diminished cutaneous secretion, in whom the increased tension of the radial arteries is found, we may be sure that we are benefiting him but little, while we expose him to the danger of a cerebral apoplexy. For the cerebral arteries are as tense as the radial. If, however, the abnormal tension is increased, as sometimes occurs after the administration of digitalis, cerebral hæmorrhage can easily occur, as I have observed in five cases. We must therefore be very guarded in our use of digitalis in such cases. Although such cases, after a superficial examination, seem to indicate the application of this drug, it will expose the patient to great risks.

Among the cases under consideration, in which the abnormal peripheric resistance may be considered as the cause of the evil, there are a few in which the tension of the aortic system has diminished during the course of the illness. In these there was orginally an abnormal tension; during the stage of compensatory disturbance the radial arteries were very tense, but even then less so than in the period of perfect compensation. In these instances we may expect to, and do achieve some benefit after the administration of digitalis. Even here digitalis must be omitted as soon as the arterial tension diminishes to its original degree.

I would take this opportunity to remark that the observation

of the degree of tension is always of the greatest practical importance. Unfortunately the teachings of the pulse have fallen into disrepute of late; from the one extreme of the ancients, who overestimated the influence of the revelations of the pulse on diagnosis, we have passed into the other extreme of neglecting, beyond measure, the phenomena presented by the radial arteries.

The result obtained by the application of digitalis is much more satisfactory in all those cases of valvular lesions, in which the radial arteries are abnormally relaxed during the period of compensatory disturbance, than in the class just treated of. In these instances we always perceive some benefit from the application of digitalis in the beginning. The only difficulty is that the patient becomes accustomed to the effects of the drug. I have, therefore, adopted the rule, not to give digitalis many times in succession in the beginning of the disease, but to discontinue its use as soon as the arterial tension is secured. Then profuse diuresis sets in, the dropsy, cyanosis, etc., disappear. If we continue to give digitalis, perhaps, too long, we often arrive at the very opposite result to that which we desired. Owing to the diminished arterial tension, the patient again passes less urine, and the dropsy, etc., returns.

These are the phenomena observed at the bedside. We will now endeavor to obtain, by a closer examination of symptoms, an explanation of the action of digitalis. The stage of compensatory disturbance consists, as before said, in diminished force of ventricular contraction, in consequence of which all the deleterious phenomena of valvular disease are presented. In order to appreciate this we need only to observe cases in which valvular disturbance has just set in; for instance, in endocarditis as sequel of articular rheumatism. We often see the helpless and apparently dying patient recover, and be, to all appearances, entirely free from danger. These are the cases in which physicians often compromise themselves by stating that valvular disease cannot be cured. It is true that the valvular defect cannot be lessened, but its injurious effects are compensated for by an hypertrophy. If we auscultate and percuss an

apparently cured patient, we find an increased size of the heart, though the heart-sounds are the same, or even more distinct than before.

The result of the diminished contractility of the heart-muscles is a lessened tension of the aortic system, and an increased tension of the venous system. What is the disadvantage resulting from a diminished arterial tension in the aortic system? Ludwig has the credit of being the first to draw attention to the fact that a continuous filtration of nutritive materials will take place in consequence of the tension in the circulatory apparatus. Milne Edwards has called this a process of irrigation, because the tissues are overflowed by the filtered liquor sanguinis. Let us suppose, as must be the case in diminished arterial tension, the current reduced, we can then easily conceive that, owing to the diminished supply of nutritive substances the tissues must suffer, and their functional capacity be impaired. Besides this, we know that certain secretions are dependent upon the pressure of the column of blood on the walls of the vessels. The variations in the secretion of urine are well known in this connection. Other secretions will vary in the same manner as that of the kidneys if subjected to the same influences, and after this we will hardly find it surprising if a patient, with diminished tension of the aortic system, secretes less pepsine in consequence, and suffers all the pain of impaired digestion.

The tension of the arteries is also of importance in regulating the rapidity of the circulation. E. H. Weber has proven that the rapidity of circulation, *cæteris paribus*, depends on the difference of tension in arteries and veins. As long as such a difference exists, blood will pass from the arteries into the venous system. Less blood will pass into the veins after a reduction of the pressure in the arteries, and as a result of this, less oxygen will be carried to the tissues. We thus find two sources of life impaired after a diminished tension of the arteries. If we examine these facts from this standpoint, the great injury which must follow diminished tension in the aortic system is self-evident.

We know now that digitalis increases arterial tension; this can be proved by direct experiment as well as by clinical observation. We may therefore place the greatest trust in digitalis, when administered during the stage of compensatory disturbance with diminished tension of the arteries, being sure that it will allay all evils arising in consequence of lessened pressure on the arteries. We see in these cases that, after the administration of digitalis, the secretion of urine is restored coïncidently with the increased arterial tension, the appetite improves, the dyspnœa and the muscular weakness disappear; in short, all evil symptoms, which depended on the reduced tension of the arteries, are removed.

Besides, the removal of the diminished tension induces a diminished frequency of the pulse, and is thus of benefit in all such cases as those spoken of. By this means the heart is brought into a more satisfactory relation to nutrition, as its nutritive material is principally absorbed during the diastole. This is the more desirable, as the nutritive material is the more needed during the increased activity of the organ. The satisfactory action of digitalis, which is observed at the bedside in these cases, is produced in two different ways. First, by producing an increased arterial tension; and next, by diminishing the frequency of the pulse.

It is easily comprehensible that digitalis cannot be of benefit in all varieties of organic heart disease. We have already considered a number of these, in which the use of digitalis is contra-indicated, because the arterial tension was already increased to a noticeable degree by some obstruction in the periphery of the aortic system. It is equally improper to apply digitalis in such instances, in which a valvular lesion is found in an apparently healthy individual after a superficial physical examination. To administer digitalis in such a case would be to produce compensatory disturbance. For in such cases the diminished frequency of the pulse, produced by the action of digitalis, easily gives rise to compensatory disturbance.

Besides these, there are other cases of organic heart-lesions

in which digitalis must not be administered. To be sure, it is wrong to interdict altogether the use of digitalis in an entire category of valvular lesions, as the Irish physician Corrigan (Sir Daniel) has done in regard to aortic insufficiency. He considers the prolongation of the diastole as the injurious effect of digitalis. In consequence of this the ventricle is necessarily exposed longer to the impulse of the regurgitating stream of blood, which will thus produce an enlargement of the cavity. Clinical observations prove to a certainty that, in spite of this very plausible hypothesis, digitalis may be given with benefit in cases of aortic insufficiency as well as in other valvular lesions of a kindred nature.

Let me close, with a few remarks on a cardiac disease in which I have given digitalis, and which was first described by Stokes as "weakened heart." This is not a very rare affection; it is generally caused by excessive nervous excitement, and it can be recognized by the irregularity and increased frequency of the pulse. The radial arteries are at the same time collapsed, and the tension has disappeared. Besides these, no other symptoms can be discovered in the beginning. Later on, in the course of the disease, we have symptoms of hypertrophy of the heart, and dyspnœa sets in. The patient may die apparently from the effect of heart disease, or from *mors subita*. This affection depends upon a paralytic weakening of the pneumogastric nerve. The result of this is an increased frequency of the pulse. The heart loses sustenance, and hence a fatty degeneration of the muscular fibres is produced. In the beginning of the disease the patient experiences relief after the use of digitalis, even if the frequency of the pulse is not diminished. In the later stages of the affection the patients object to digitalis. The pneumogastric has become blunted to the effects of the remedy, and this diminution of the energy of the par vagum must induce us to give an unfavorable prognosis.

ART. II.—A CASE OF PARALYSIS OCCURRING FOUR YEARS AFTER INJURY. By J. B. MOBBERLY, M. D., New Market, Frederick County, Md.

On April 8, 1870, I was called to see E. W., aged thirteen years; complaining thus, as stated to me by his parents.

A short time back he experienced great weakness, which was considered laziness, and no attention was paid to it, but he was told to go to work, which he did reluctantly.

This state of things continued for some time, until he refused to work any longer. He was then supposed to have rheumatism, and treated accordingly, but without benefit, gradually growing worse.

A few days before I was first called in, as he was in the act of crossing the yard, he was seen to give way in the knees and fall, and had not, up to the time I saw him, been able to move from his chair without assistance. Previous to this he had never been sick, and was considered the healthiest of the family. The lower limbs seemed to be the parts most affected, though the upper limbs were also, but in a degree hardly perceptible.

It was very evident that, instead of rheumatism, I had a case of paraplegia to deal with. The boy suffered no pain, except when standing, and then very slightly.

Now for the cause. I stripped him entirely, first made an examination of the spine. I found one of the spinous processes (lumbar vertebra) gone, and the question then was, how did he lose it? No one knew anything about it until after a great many questions. I learned that about four years back he went with his brother (contrary to his mother's command) to thresh a chestnut tree, and while stooping under it, his brother let fall on him from the tree a heavy pole, which struck him on the back, and for a long time after he could hardly get along. He did nothing for it, for fear that his mother would find it out. He did not remember the exact time it occurred, but some time after he ceased to feel any bad effects from it. His mother said, that for the past three or four years he had not been as smart a boy as before, showing that some change had come over him.

The examination of the rest of the body developed nothing abnormal.

*April* 12*th.*—Find patient worse; cannot stand with assistance; pain in the head; took cold; pain in breast; cough; too weak to expectorate; can't see so well; reads only for a few minutes, then all is a mist; pupils natural; pain in back. Speech somewhat impaired; when in bed cannot move; if legs are crossed cannot get them back. Good use of his hands; appetite very good; bowels costive; has to take purgative medicine continually. Gave him volatile liniment for chest; cups to back, only taking a drachm or two of blood; quinine, fer. sulph., nux vom., and rhœi. pills three times a day.

℞.—Quin. Sulph., grs., xv.;
Ferri. Sulph., grs., xxx.;
Nux Vom., grs., x.;
Pulv. Rhœi., ℥i. Mis. ft. pill, xxx.

*April* 16*th.*—Find patient better of chest troubles, the rest being the same. Sight somewhat improved. Prohibit reading; allow him to eat whatever agrees, but not too much. Continue pills and liniment.

*April* 21*st.*—Find patient better; sight entirely restored; can read well, and as long as he likes without inconvenience; no longer necessary to give purgative medicine, except what was contained in the pills. Paralysis very much the same. Continue pills and liniment.

*May* 6*th.*—Patient the same. Continue pills.

*May* 16*th.*—Find patient much the same; suffering with some subsultus tendinum of neck and face; attributable to nux vom. in pills; discontinued pills until they had subsided, and ordered them to be stopped at any time it reöccurred, and wait a day or two before commencing them again.

Was not to see him again until sent for.

*May* 24*th.*—Called to see another member of his family. Found boy much better; could begin to use his lower limbs; put them on a chair, and sat on another, the gastrocnemii mus-

cles appearing to show the first signs of repair giving him a temporary talipes equinus. Continue pills.

*May 25th.*—Boy much the same.

*May 27th.*—Find him improving.

*June 1st.*—Found him much better; could take a few steps with assistance.

But now another trouble. As his lower limbs improved his upper limbs were growing worse; he cannot now hold to anything; has to be fed. Gave a stimulating liniment for his arms, and continued pills.

*June 4th.*—Find his lower limbs still improving; can walk tolerably well with assistance. Upper limbs still growing worse; seems to be entirely powerless, especially at the wrists. Continue liniment and pills.

*June 8th.*—Find him about the same, except his appetite is not quite so good, and feels very weak when he gets up in the morning; weakness passes off about 10 o'clock. Ordered milk punch to be taken about an hour before rising. Continued pills and liniment.

*June 11th.*—Find him much better; all weakness has passed off; arms somewhat better; can hold on to things tolerably well. For example, can hold to the railing and walk around the porch. Continue pills, liniment, and punch.

*June 19th.*—Find him still improving; use electricity, with same treatment as before.

*June 24th.*—Find him still improving; can walk across the room by himself, and use his arms comparatively well. Continue the same treatment, except electricity, which would not work.

*July 5th.*—Find him much better; improving in his walking; arms slightly improved. Apply electricity and continue same treatment.

The bladder in this case was so slightly affected as not to be worthy of notice.

He has continued to take his pills, gradually decreasing the amount until September. At that time he appeared quite as

well as he ever had been in his life, and has continued in good health ever since; increasing in weight from 90 pounds when I first saw him to 120 pounds on June 1st, 1871.

The case of which I have given a synopsis is one of great interest, and instead of two or three pages, it affords material for many, in showing how an injury of the kind could take so long a time as three or four years to produce its effects, and in what way it could cause paralysis. But as I have not time to give more, I will simply state that in my opinion it could not arise from any other cause than the one given.

Since the injury there had been a gradual loss of nervous power hardly perceptible, until at last Nature could no longer maintain her own, and disease necessarily triumphed.

The treatment I adopted may seem to be a very simple one; much more so than might have been used, but I think it suited all the symptoms in the case, and would suit all similar cases of paralysis resulting from the same causes.

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ART. III.—FOREIGN BODY IN THE TRACHEA NOT PRODUCING THE USUAL SYMPTOMS. By J. UNDERWOOD HALL, M. D., Gold Hill, Nevada.

On Wednesday, July 9, 1871, at 11 o'clock A. M., I was summoned to the residence of Mr. George W. D——, a few rods distant from my office, whose daughter, aged four and one-half years, represented that she had just swallowed a bean, and judging from her livid countenance, embarrassed breathing, and impending suffocation, I was induced to believe that her assertion was correct. I at once introduced my index finger into the pharynx and fauces, which produced moderate retching, at the same time apparently relieving the obstruction and spasm of the glottis. I gave her some water, which she drank without difficulty, and expressed herself entirely relieved. I questioned her as to where she got the bean, she said that she would show me, and went out a few paces in front of the house,

pointing to a spot where a number of oblong white beans had been spilled on the ground. At that time, from her apparent relief, I was induced to believe that the bean had not passed into the trachea, but had been lodged externally to the rima glottidis, and that by thrusting my finger into the pharynx I had dislodged it, and that she had swallowed it into the stomach. I left the patient under that conviction, but on the following day, (she having experienced no inconvinence in the meantime from the extraneous body, no cough nor dyspnœa), 28 or 29 hours after the accident there was a message left at my office to visit in haste the little girl, "that she was taken just as she was the day before." I was absent, returned in an hour, and immediately responded to the summons. On my arrival at the house I found Drs. C—— and B—— in attendance, who had been summoned in my absence. Dr. C—— arriving first, had diagnosed the case as laryngismus stridulus, and accordingly gave her 20 grs. pul. ipecac, prescribed brandy internally, and ordered mustard bath; no emesis from the ipecacuanha. The dyspnœa and impending suffocation very great. Dr. B—— arrived, concurred in the diagnosis, and suggested one scruple sulphate zinc, which was given; producing no emesis. At this juncture I arrived, and received from the physicians in charge an account of the treatment the patient had received, and their diagnosis of the case. Up to that time she apparently had received no benefit from the treatment which she had been subjected to, the prostration and impending suffocation becoming greater with every respiration. In consultation with Drs. C—— and B—— I stated to them that I must disagree with them as to their diagnosis, being convinced that the symptoms were not croupal, but that they were produced by a foreign body in the wind-pipe. But they contended that no extraneous body could remain in the air passages 28 or 29 hours without producing symptoms to indicate its presence, she having rested, ate, drank, and slept as usual, until a few minutes before the second siezure of suffocation. I insisted that she must die from suffocation very soon if not relieved by an operation, and urged the neces-

sity of resorting to tracheotomy as the only probable method of relieving her. Her counsel insisted on administring one more scruple of zinc, and if that did not produce vomiting, and relieve the spasm of the glottis, that they would then consent to the operation. The zinc was given, waiting some twenty minutes for its operation, during which time a spasm intervened, from which she never rallied. I was so very sanguine that my diagnosis was correct, that I desired to verify it by an autopsy, to vindicate myself in the former conducting of the case, and insisted on making a *post mortem* examination, which was granted. Dr. B—— and myself proceeded to open the windpipe, and found the bean lodged transversely in the trachea at its bifurcation. The bean was greatly swollen, and doubtless had failed to produce much obstruction until the swelling occurred, remaining dormant from the time that I dislodged it from the glottis.

My object in submitting this article is to show the length of time an extraneous body may remain in the air passages without producing such aggravated symptoms as to indicate its presence in the air passages, and from its entire passiveness to lead two physicians, eminently qualified to diagnose, to make an incorrect diagnosis.

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ART. IV.—A MAN RUNS SIXTY YARDS AND LIVES ONE HOUR AFTER BEING SHOT THROUGH BOTH LUNGS AND THE RIGHT AURICLE OF THE HEART. By J. B. ROBERTS, M. D., Sandersville, Ga.

On Saturday morning, about 9 o'clock, September 9, 1871, Dr. W. W. Carr shot his son-in-law, Mr. S. D. Grantland, with a Spencer rifle (seven-shooter), carrying a ball of one and a quarter ounces in weight. The coroner's inquest justified Dr. Carr in the killing, and the body of the deceased was carried to Milledgeville, Ga., (about twenty miles from Dr. Carr's, where Mr. Grantland was killed), and buried the next day. The father and relatives of the deceased became very much dissatisfied,

and had the body exhumed on Thursday, the 14th of September, 1871, and had a post mortem examination made by six physicians in Milledgeville.

Dr. G. D. Case, an old physician, who has been practising thirty-eight years, used the knife. I will now give their statement as given before Judge H. D. D. Twiggs, in the courthouse, in Sandersville, Washington county, Ga., by Dr. Case, in the commitment trial of Dr. Carr. I will state just here that the verdict of this commitment trial was justifiable homicide. I don't propose to give all the facts in this case, but simply those that go to prove the nature and character of the wound. I desire to report it for future record to the medical profession.

Dr. G. D. Case being duly sworn for the State, says: "I was present at a post mortem examination on the 14th of September, 1871, on the body of Seaton D. Grantland. The body was exhumed by direction of the coroner in presence of witness and five other physicians. I found the face very much disfigured, enormously swelled, from the lower part of the neck down the body was in a good state of preservation. The body was swollen, but not as much as that of the face. I removed the clothing from the body of the corpse in person. I found in the posterior part of the right arm a superficial gunshot wound, I found after that the wound in the arm corresponded with the wound in the chest. The ball entered the right cavity of the chest between the sixth and seventh ribs, fifteen inches downward and backward from the sterno-clavicular articulation, twelve inches from the median line in front, and backward in the right side, seven inches from the spine on the right. The ball passed through the middle lobe of the right lung, through the anterior wall of the right auricle of the heart, cutting its way through the anterior part of the upper lobe of the left lung, and emerging from the body between the fourth and fifth ribs about two inches below the left nipple; the distance from the median line four and a half inches to the left, eight inches below the sterno-clavicular articulation of the left side; distance measured from the spine and left side fifteen inches. I opened

the chest and found the lung very much collapsed, I found the heart entirely collapsed, not containing a teaspoonful of blood. The wound in the right auricle of the heart was large enough to put my finger in. I opened the body and traced the ball with each of the other physicians. It is my opinion, from the condition of the wound upon the body of Mr. Grantland, that he could not have lived more than half a minute. I think possibly that if he was running when he received the shot, that he might have run five, six, or ten steps, but not sixty yards. The deceased, I think, could not have risen after he had fallen when shot. There were no other wounds upon the body. The swollen condition of the body might have made a little difference in the transverse measurement. The body indicated that he was in the vigor of health. I think that a man might live several minutes after being shot through the auricle, provided the wound was very small and jagged, and the person in the vigor of health. I have read of persons living several years after being shot in the ventricles, but not in the auricles. The ball struck no rib. I think that Mr. Grantland might have lived half a minute, but not more; yet there are exceptional cases, and we are sometimes deceived, but I have not, in all my authorities, seen where a man has lived any length of time with a wound of this size in the heart."

I have given the above testimony of Dr. Case just as he stated it in the court-house at the commitment trial. I will now give the statement of Dr. A. Mathis, as he was the acting physician at the coroner's inquest held at Dr. Carr's house over the body of the deceased.

Dr. A. Mathis being duly sworn for the defense, says: "I acted as a physician at the coroner's inquest. I found that a gunshot wound had passed through the right arm about the junction of the upper and middle third of the humerus posterior to the bone, the ball entered the right side eight and a half inches from the spine, six and a half inches from the posterior angle of the axilla space, passing out two inches below the left nipple. The ball entered about the seventh and came out between the

fourth and fifth ribs. I think it was about twelve or fifteen inches from where the ball entered to where it came out, but did not measure it. I am acquainted with wounds of the heart from reading authors on the subject, and think that a ball might pass through the right auricle of the heart without producing immediate death. I think it possible, from authorities that I have read, that a man shot in the heart might run seventy or seventy-five yards. I think a man of a robust constitution could stand it better than one of a delicate constitution. Mr. Grantland was a robust man. I regarded him to be in the full vigor of health. At the time Mr. Grantland received his wound, I suppose he was standing with his side to the person who shot him. There was no bleeding externally that I could discover on the ground or person."

I believe that I have given all the testimony that relates to the matter and character of the wound. I will now give the evidence of the witnesses present at the time of the shooting of Mr. Grantland, to show that Mr. Grantland, the deceased, after receiving the shot, turned half around and ran (with a pistol in his right hand and his left hand upon his breast) sixty yards before he fell; he sat up once or twice by propping himself with his hands upon the ground; he got upon his hands and knees once or twice, but would soon fall over; he spoke a few words, and lived about one hour before he died after receiving the wound.

Mrs. Nancy Wadsworth, sworn for the State, says: "I was present at Dr. Carr's on the 9th of September, 1871. I was there in the capacity of a midwife for Mrs. Grantland. I was standing on the piazza talking to Dr. Carr, when I saw Mr. Grantland coming towards us with his pistol in his hand. Dr. Carr was standing on the step next to the bottom step with the strap of his gun around his shoulder, and the gun hanging by his side, and had started to walk out over his plantation. As Mr. Grantland had threatened his life that morning and abused him a great deal, he wanted to get away from him. He almost invariably carried his gun with him when walking around the

plantation. Mr. Grantland walked up within about seven or eight steps of Dr. Carr with his pistol cocked and presented, when Dr. Carr said to Mr. Grantland, 'you are about to shoot me, eh?' and by the time the words were out of his mouth, he (Carr) threw up his gun and fired, without placing it to his shoulder. I saw Mr. Grantland then turn and run out at the gate, down towards the lot, and fell. He ran with one hand upon his pistol and the other upon his breast, leaning over and forward while he was running. I walked down to see Mr. Grantland after he was shot, and his pistol was lying about four feet from him. He lived sometime after being shot, but I don't know exactly how long."

Rose Stephens (colored), sworn, says: "I was at Dr. Carr's about two weeks ago, when Mr. Grantland was killed. I went in Mr. Grantland's room to wait on his wife, and soon after going in, heard some one say that Mr. Grantland was shot. I went to the door and saw Mr. Grantland running off, and he ran almost to the carriage-house before he fell. I went to where Mr. Grantland was lying, and remained there until he was removed by Dr. Mathis. He was dead when the Doctor got there, but was not cold. His pistol was about four feet from him. The distance from the gate to where Mr. Grantland was shot, at the steps, is about the length of this court-house, and the distance from the gate to where he fell is about the same. When I went to where he was I asked him what was the matter, and he said, "he shot me," he then asked me to wash his face and hands. The water was brought to me by Lucy to wash his face and hands. He sat up and got upon his hands and knees together, four times to my knowledge before he died. I held an umbrella over him, and nothing was touched until Dr. Mathis and Major Erwin came. Mr. Grantland lived about an hour after he was shot."

Simon Cantey (colored), sworn, says: "I was at Dr. Carr's at the time Mr. Grantland was killed. Mr. Grantland left me at the carriage-house, and about a minute and a half afterwards I heard the report of a gun, and then I saw Mr. Grantland run-

ning. I heard the ball strike a pine tree after the gunshot, and I believe it struck the buggy-house too. I was standing near the door of the buggy-house at the time. Mr. Grantland fell about fifteen steps from where I was.

After Mr. Grantland fell Dr. Carr and Rose Stephens went to him. I believe Dr. Carr asked Mr. Grantland if he was hurt much, and then helped to set him up. I don't think Mr. Grantland said anything to the Doctor."

Winford Leveritt (colored), sworn, testified to about the same thing as the above witness.

I could give more evidence in the case if it was necessary, but my main object in reporting this case is to show that a man may be shot through the auricle of the heart without producing death immediately, although it would seem almost incredible. I am well acquainted with all the witnesses, and from my knowledge of them, and all the facts of the case, I am satisfied that the above statements are true and correct. I have been to see Dr. Carr since his trial and acquittal, and asked him as a friend and physician to give me the facts in the case as there could no harm result in his making a true statement in relation to the time Mr. Grantland lived, etc., and he stated to me that Mr. Grantland was about ten steps from him when he fired, and that Mr. Grantland turned and ran about sixty yards on a straight line and fell on his face. He stated that Mr. Grantland tried to sit up three or four times, but would soon fall over. The Doctor told me that Mr. Grantland lived an hour after he was shot. Mr. Grantland was a stout, robust man, about twenty-two years of age, and his average weight was about one hundred and sixty pounds.

Mr. Grantland's relatives tried to make a point in court, that it was impossible for a man to live over half a minute after being shot as Mr. Grantland was, and that, therefore, the statement of the coroner's inquest was false, that Mr. Grantland could not have run sixty yards, that he was shot where he fell, and not at the steps, etc., etc. But all the facts to the contrary proved clearly that Mr. Grantland was shot near the steps of the

house, that he ran sixty yards, that he spoke a few words, and struggled for an hour before he died.

## ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—MANAGEMENT OF THE OBSTETRICAL FORCEPS. By C. C. P. CLARK, M. D., Oswego, N. Y. Trans. New York State Medical Society, 1871.

In the fast-growing and ambitious cities of the West it may often be noticed that more attention is given to laying out and grading new streets, than to keeping in good condition the old thoroughfares of daily business. In these last, masses of refuse will be seen to hide a dilapidated pavement, while far out on the city's verge the surveyor and the paver are busy.

In our own art, if I mistake not, there is in like manner, an eager pursuit of novelties, to the harmful neglect of principles and methods that are of daily application. I shall offer in this article some reasons for thinking that the rules and modes of using the obstetrical forceps have suffered this neglect, and I shall make some suggestions for their improvement.

Notwithstanding the indisputable fact that only a few experienced obstetricians acquire such dexterity and confidence in the use of the forceps as to resort to it freely, it may still be truly said that the whole armory of our art furnishes few instruments that are so useful in saving life and in lessening suffering. I think it furnishes none that are so capable of serving these ends. It fails of doing all it might do, because of the real or supposed difficulties and dangers that attend its use. Many an obstetrician, skilled and ready in everything else, is afraid of the forceps. Distrusting his own dexterity and fearful of possible evils, he rarely or never resorts to this instrument. To the neophyte it is a terror.

I think the consciousness of my young readers and the recollection of their elders will give consent when I say that no operation in instrumental therapeutics is more dreaded by the novice than the delivery of a parturient by the forceps. I, for one, shall never forget the anxiety, the agitation, the sinking of the heart, the fear of failure, and, worse still, of the exhibition of incompetency, that preceded, nor the blind groping with the blades and the vain attempt to remember and apply the precepts of the books, that attended my early trials with this instrument.

Such repelling and unmanning terrors, and such fruitless efforts, be it observed, are doubly unfortunate, when, as in this operation, the crisis to be met is one that occurs to every practitioner, one that he must often meet alone, and one whose peculiar urgency is greatly augmented by the impatience, the anxiety, and the expectation of friends, and by the suffering and often the danger of the patient herself.

In my own case I cannot be wrong in attributing these early fears and perplexities to faulty instruction. My purpose in this article is to show that these terrors do not legitimately arise from the character of the operation itself, nor are these difficulties inherent in it; but that they result from the erroneous way in which the subject is taught in books and in schools. I undertake to show that, in many of its most essential particulars, that teaching is defective and erroneous in substance, and in manner unnecessarily complex and obscure. A total want of uniformity in the rules laid down by different authors adds to the perplexity of the pupil.

In place of these obscure, complex, impracticable and discordant instructions, I undertake to give a set of rules that shall be simple and intelligible, that shall be applicable to all cases, and that shall thus rob the operation of its terrors, and make its practice, for obstetricians of ordinary intelligence and dexterity, easy and certain.

The points that I propose to touch upon are:

1. The danger that attends the use of the forceps.
2. The exigencies that call for the forceps.

3. The best kind of forceps.
4. The position of the patient.
5. The law of application.
6. The manner of introduction.
7. Locking.
8. Slipping.
9. Compression of the head.
10. Management in extraction.

On all of these points I shall venture to differ more or less widely from the received authorities, and I shall discuss only the particular matters in regard to which I thus differ from them.

1st. *Dangerousness of the Forceps.*—Is the delivery of a parturient woman by the forceps attended with any considerable degree of danger to her? The general tone of our teachers and text-books replies in the affirmative to this question. I shall never forget the earnestness with which that excellent and conscietious instructor, the late Professor C. R. Gilman, used to impress upon the minds of his pupils the terrible dangers that attend the use of all midwifery instruments. It was his custom, in closing his lecture, to fling them from him with a somewhat theatrical show of terror and aversion, and to warn us in the most impressive manner of the fearful responsibility that accompanies their use. An innocent pupil was almost led to think that, in certain bad cases of labor, it was pretty much an even thing between letting the woman die a natural death and twisting her womb off with the forceps, or letting her bowels out with the perforator.

On looking over authors I find that these terrors are by no means peculiar to Professor Gilman. Cazeaux warns us of "lesions of the cervix and perforations of the vagina." He says: "There can be no doubt that the use of the forceps increases the danger of delivery." Churchill speaks of "laceration of the vaginal parietes, bruising the os uteri," etc., etc. Blundell says: "In violent hands the long forceps is a tremendous instrument. Force kills the child, bruises the soft parts,

occasions mortification, breaks open the neck of the bladder, crushes the nerves," etc. etc. So much is he afraid of wounding the soft parts that he advises us always to count the pulse between the pains, to see whether we are killing our patient!

It was reserved for Dr. G. S. Bedford to reach the acme of terrorism, and to stir the imagination of his hearers and his readers with the most fearful pictures of ruin wrought by the forceps.

"The use of the forceps," he says, "is too often a scene of harrowing agony to the patient." He speaks of "fractured bones" and "disparted symphyses"; of "vesico-vaginal fistula," of "occlusion of the vaginal walls and the meatus urinarius," etc., etc., as common results after forceps delivery.

He pretends to support these statements by cases, but the reader who carefully examines these cases will see that they really give his representations no countenance. In the case, for example, which he gives on page 570, the history that he narrates in no way warrants him in attributing the calamitous result to the use of the forceps. It was probably due to the length—three days—and the severity of the labor, and would in all likelihood have been different if the forceps had been used in time. It was probably "masterly inactivity," and not the forceps, that did the damage. I believe that similar criticism will apply to almost all of the cases that are given in books to illustrate the dangers of the forceps; the premises will not warrant the conclusion, and, indeed, the history is generally too imperfect to warrant any conclusion. To me, with some observation and experience of my own, these terrible representations seem ridiculous and absurd. I affirm *that the forceps is not in any material degree a dangerous instrument* to the mother. In my own practice and observation I have but once seen death follow a delivery by the forceps. In that case the fatal flooding was clearly due to exhaustion and uterine atonicity from too long delay of delivery; the application of the forceps and the extraction of the child were quick, easy, and painless. I have seen some discreditable fooling, and a little cruelty with the

forceps, but I have never seen a case in which there was reason to attribute any injury of the parturient to its employment. When skillfully used it is not only harmless, but painless. I never attended a patient whom I delivered with this instrument without her asking for it again. The forceps is, indeed, a peculiarly innocent instrument. With its curved form and rounded edges it is almost incapable of mischief. It cannot cut, or puncture, or tear, or scrape. Neither can it bruise the soft parts without the most stupid and reckless violence. As for its being pushed through the vaginal or uterine walls, it would be difficult or impossible to do it intentionally. Injury to the bony parts of the pelvis is equally out of the question.

The proportion of women that die after the use of the forceps is no evidence of its dangerousness; as well might we in the same way argue that bleeding, or opium, or any other treatment is dangerous in puerperal convulsions. Statistics are therefore of no value. It is obviously impossible to distinguish between the deaths that are caused by the forceps—if it is claimed that any are so caused—and those that result from the conditions that called for them, or from other causes. The forceps is seldom resorted to save in protracted and difficult cases, and in these a considerable mortality is to be expected from causes entirely independent of the instrument.

I will not deny that, if the operator, following the instructions of the books, endeavors, obstinately and uncompromisingly, to introduce the long, double-curved forceps into the upper part of the pelvis, with its pelvic curve twisted from accordance with the anatomy of the passage thereto, he may injuriously bruise the maternal parts; nor will I deny that a similar or even greater evil may result if he imitate Dr. Elliott (viz., his Obstetrical Clinique, *passim*), and wantonly and absurdly use such force as to "break" or "bend" a blade, "endanger the integrity of his instrument," "lay out his whole strength with braced feet," etc., etc. What I do claim is that, if he use ordinary anatomical knowledge, mechanical skill, and common sense, the obstetrician cannot harm his patient with the forceps,

and therefore the conscientious practitioner need never fear to try them. I think it would be difficult to find a single case in the books that, properly interpreted, even tends to prove the contrary. I have not found one. I am substantially supported in my opinion of the innocence of the forceps by Professor Simpson, as the reader will see by reference to his obstetrical works.

I shall not claim that this instrument is ordinarily *as harmless to the child as it is to the mother.* The features of the infant are in practice often temporarily, and sometimes permanently, disfigured by it, while the bones, and even the viscera of the head, have been sometimes fatally crushed. Dr. Elliott, in his "Obstetrical Cases," furnishes several instances of this. I do, however, claim that these injuries are entirely unnecessary, and proceed solely from want of skill in the operator. It is only when the grasp that the forceps gives is used for the purpose of compression, or to avoid slipping, that the instrument, when properly applied, can do any damage to the child's head. I expect hereafter to show that compression is never necessary or useful, and that, when properly applied, the forceps cannot slip.

The fear that seems to possess many obstetrical authors of punching off the ears, or peeling the cranium of its scalp in passing the blades, is entirely absurd. Such an accident is substantially impossible. The beginner really need not have the bother of taking care of the child's ears added to his other troubles.

2d. *What are the exigencies that call for the forceps?* This question, in my opinion, admits of a simple and comprehensive answer. The occasion, the justification, and the obligation of using this instrument are coëxtensive and identical. Whenever, in a head presentation, with probable room for the head to traverse the pelvis, and with the os fully dilated or partly dilated and easily dilatable, the longer continuance of unaided labor involves danger either to the mother or to the child, or even a long duration of suffering to the mother, the forceps should be

used. I go further; I hold that the forceps is justifiable sometimes in order to cut short the unnecessary protraction of those anxieties of the patient and her friends that attend uncompleted labor, and even to save the time of the practitioner himself. I am well aware that in this opinion I widely depart from the maxim that authority sustains. Churchill, though reckoned an advocate and defender of the forceps, lays down the rule, in italics, for emphasis, that "they are to be applied in no case till we are perfectly satisfied that the obstacle cannot be overcome by the natural powers with safety to the mother and the child." It is such a rule as this, causing perilous delay, that makes this instrument, in crude statistical tables, seem the means of death. I repudiate this rule. It is a rule that may fitly be followed by those who believe the operation to be difficult or dangerous, but it is not one for me, who think I find it as easy as the passing of a catheter, and as innocent as giving an enema.

As it is not my purpose to write a systematic treatise on the forceps, but only to touch upon those matters where I think the existing practice is erroneous, I shall not enumerate and discuss in detail the many items that are comprehended in the rule that I have laid down, but shall content myself with some observations on certain supposed limitations of it that are to be found in the text-books. Those limitations that hang on the supposed dangerousness of the operation I have already sufficiently discussed.

It is said that great violence of the pains contra-indicate the forceps, on the ground that a reïnforcement of the expulsive power would be dangerous. This doctrine is entirely erroneous. The use of the forceps in such cases, in addition to its ordinary advantages, saves the womb from some part of that perilous violence of muscular action that, besides minor evils, sometimes threatens even its own integrity.

Neither is extreme resistance or rigidity of the soft parts a contra-indication. It is even an indication. If rigid perinæal tissues be the obstacle, the danger of their laceration will be

lessened by the forceps. The wedge-like form of the proximal end of the locked blades is an important aid in dilatation. It prepares the way. Meantime it diffuses the bearing of the uterine force along the longitude of the vagina, lessening its intensity at any point. On the other hand, so far as the resistance is due to the action of the perinæal muscles, greater mechanical force in overcoming it is in no way objectionable; and it can certainly be more cheaply furnished by the arm of the obstetrician than by the uterus of the mother.

Moreover, the experienced practitioner will remember that a majority of the cases of laceration of the perinæum occur when, after long delay at that point, and many ineffectual pains, the uterus, as if vexed by the futility of its efforts, with one tremendous throe suddenly bursts through the obstacle. Reflex power, when repeatedly foiled, does thus accumulate. The forceps, by securing the steady progress of the head, in some degree obviates the danger.

Besides this, it is to be remembered that laceration of the perinæum seldom or never occurs, save when there is a congenital deficiency of the elastic tissues of the vulva. This imperfect development may be hardly appreciable, or it may approach atresia. If it exist in even a slight degree, laceration of the parts is perhaps inevitable. Whatever the degree of danger may be, it will not be increased by the forceps unless the final delivery be wantonly and violently precipitated. The additional bulk made by the blades is next to nothing, and is more than balanced by the slight elongation of the head that almost necessarily attends their use. Meantime their wedge-like shape, beginning earlier the dilatation of the external parts, necessarily makes it more gradual, and therefore safer.

Not a few authors declare that the use of the forceps should not be attempted when the head is above the superior strait. I can conceive of no good reason for this limitation. The operation under these circumstances is somewhat more difficult to the inexpert, and is sometimes impossible, but it is entirely free from the objection of peril. When the waters have escaped, tonic

uterine contraction generally holds the head firmly against the inlet of the pelvis, with a larger or smaller segment of it engaged therein. In this condition a tolerrbly expert operator will have no great difficulty in grasping it with his instrument, and, if it be not detained by insuperable mechanical obstacles, delivery can readily be effected. On the other hand, when, from deficient tonicity of the uterine walls, or from the presence of a considerable quantity of amniotic fluid, or from both of these causes combined, the head is freely movable or floats above the pelvic brim, the attempt to apply the forceps will be of doubtful success. Turning is then the surer resource. This exigency may coëxist with hæmorrhage, convulsions, or other accidents calling for speedy delivery; but it can hardly obtain in any of the forms of dystocia proper, save in that in which there is so considerable narrowing of the pelvic brim as to make impossible any other means of delivery than embryotomy. The principal source, in my opinion, of the objection that many authors entertain to the use of the forceps when the head is in high situations, is in their utterly erroneous mode of applying the instrument. It is this that makes very many respectable authors oppose its use even when the head is already engaged in the superior strait, and needs but the touch of skill to cause it to finish its course.

3d. *What kind of forceps should be used?*—To the possessor of the long, double-curved forceps, the short forceps is utterly useless. Everything that can be done with the latter can be done with equal facility, safety, and painlessness with the former. The obstetrician who sports both kinds, must be of a piece with the well-known gentleman who directed the carpenter to make in his garret-door a big hole for the old cat and a little one for the kittens!

Equally unnecessary is it, in my opinion, to have several different forms of the long forceps. The editor of Professor Simpson's Obstetrical Works reports him as saying that "the more frequently he applied the forceps the more firmly he became convinced that one pair, of proper form, would answer for all

forceps cases." (Vol. 1., p. 442.) I entirely coïncide in this opinion, and in the last fifteen years of tolerably extensive obstetrical experience have had occasion to touch but one pair. I am, accordingly, quite unable to appreciate the practice, in this particular, of Professor Elliott, who, in his "Obstetrical Cases," reports himself as often trying several pairs in succession in the same labor. He seems to carry about with him as many tools as a carpenter or a burglar. This, of course, is not done for effect. He may safely trust more to his own skill and less to the skill of his instrument-maker.

The exact shape of the blades and the mode of locking have been the subject of a great deal of attention, and of many modifications and supposed improvements. One would imagine, from the amount of ingenuity that has been expended on the subject, that accoucheurs were in pursuit of a key to open some intricate lock, and not of a pair of slender artificial hands to glide along a passage of well-known shape to a position that our own hands cannot reach, and to clasp there simply an ovoid body. All of the modes of locking are good enough; and I am inclined to think that the slight differences in the shapes of the modern instruments are not very material. The instrument that I use (and of course think the best that was ever made) is called in Paris "Dubois" forceps, and was made by Charriere, of that city. It is considerably longer, and somewhat more pronounced in its pelvic curve, than Simpson's or Elliott's, and, in my opinion, is therefore better. I have not found it necessary to add to it the sliding guard of the latter inventor.

4th. *The position of the patient.*—The expert operator can apply the forceps equally well with the parturient on her side and on her back. The former position has this advantage, that, since women in this country are generally confined on the side, the arrangements for the operation in that position are less disturbing than in the other, and therefore less menacing to the imagination of the patient. This position also gives better access to the field of operation. I shall, however, recommend the other posture; for the reason that it better enables the practitioner to

see, *with the mind's eye*, the anatomy, the mechanism, and the physics of the matter in hand. It is the position in which bodies are dissected, and in which we are in other ways most familiar with the female pelvis. In addition, this posture is symmetrical with the posture of the operator while operating—a fact which greatly facilitates both his conceptions and his manipulations.

5th. *The principle of the application.*—The grand question in the use of the obstetrical forceps is, *whether the law of their application should have relation to the particular presentation of the head, or to the curve of the pelvic axis; to the anatomy of the child, or to the anatomy of the mother.* Shall we have regard to the theater, peculiar and nearly invariable in form, and definitely limited in extent, in which our operation is to be conducted, or to the posture in which the object to be seized may chance to lie? It is the former of these alternatives that the American, English, and French authors that happen to be within my reach, unanimously adopt. Most of them say that the blades of the forceps should be applied "to the sides of the child's head," "parallel with the parietal bones." Even those who admit a less exclusive rule, substantially coincide with Professor Bedford, who delares: "It is the position of the head that should determine the position of the blades." (*Principles and Practice of Obstetrice*, p. 558.) The same doctrine is taught by all the public lecturers on obstetrics that I have had the opportunity of hearing. In short, this is the principle that the American student finds everywhere laid down. It is not necessary to multiply quotations.

Prof. Simpson, it is true, appears to be partly aware of the absurdity of this rule. He says (*Obstetrical Works*, Vol. I., p. 440), that "the application of the long forceps to the lateral or aural surfaces of the child's head at the upper strait, as described by Burns, Dewees, etc., and pictured by Churchill, is impossible in the very cases in which they are generally required;" for these reasons, among others, that "their pressure would greatly endanger the urethra and bladder in front," and "that they

could not thus be placed in the axis of the brim, in consequence of the pressure of the perinæum upon the instrument below." He makes like objections to the mode of application taught by Deleuyre, Davis, and others, and illustrated in Ramsbotham. But when Dr. Simpson comes to lay down a method of his own, he falls into the same fundamental error as those whom he condemns. He directs the blades to be applied upon a certain diameter of the head. In other words, he teaches us to be governed by the *presentation*, and not by the maternal anatomy.

In my opinion this rule is entirely erroneous. I believe that the blades should simply follow the course of the utero-vaginal canal, and, when applied, should, in all cases, be in accord with the curve of the pelvic axis, regardless of the presentation. I believe that the presentation is not of the slightest consequence, and cannot be advantageously, or, in many cases, even innocently regarded. Wherever the sides of the head may be, the blades should be applied to the sides of the pelvis. I should perhaps hesitate in thus rejecting the traditional and uniform instructions of our authorities, did I not find it casually mentioned in Cazeaux, p. 802, that the method that I recommend is the practice of at least a part of the profession in Germany.

If the received doctrine on this subject be an error, it is a very grave error, and leads to very grave evils. The first of these is, that it imposes upon the operator the necessity, as a preliminary step, of ascertaining the presentation. Even to the experienced practitioner this is not always easy; to the neophyte it is always difficult and uncertain. Knowing it is to be so, he is never sure that he is handling his blades rightly. This doubt is a constant source of embarrassment and hesitation, and often makes him withdraw and introduce a blade again and again.

A far greater evil is that this doctrine necessarily makes the rules to be followed exceedingly complex: for the modes of introducing and applying the forceps must be as various as the presentations. Accordingly we find in all our authors a great variety of rules for the different presentations. Cazeaux gives

special directions for each of eight vertex presentations when the head is at the inferior strait. Above that point, vertex presenting, he makes still other varieties of procedure. In face presentations he gives us similar changes in the modes of application.

Dr. G. S. Bedford has four variations in the application of the forceps at the upper, and four at the lower, strait. After these comes a miscellany of some half a dozen other modifications.

Dewees says, "the forceps should be appled to the sides of the head." He has four variations in this operation for the seven primary presentations that he counts, and still others for the more rare and difficult presentations.

Meigs lays down the same rule, "that the blades are to be applied to the sides of the head," and makes as many varations in the operation, some ten or a dozen, as consistency seems to him to require. His whole chapter on this subject is worth reading as an example of "confusion worse confounded."

Churchill says, that "at the brim of the pelvis the forceps may be applied in the transverse, the oblique, or the antero-posterior diameter," etc., etc., according to the presentation.

These references to popular authors, selected at random, are sufficient to show the extreme complexity of the rules for delivery by the forceps—as they are presented to learners at the present day.

It will be worth while for those who are curious on the subject to follow farther this comparison of obstetrical authorities. They will not fail to notice that, true to the native inconsistencies of error, the directions given in the different text-books follow no common law or principle, but are various and conflicting in the utmost degree. The number of varieties in the mode of application is from three to more than a dozen. Some authors give different directions, according as the head is at the upper or the lower strait, or between these points; others make no distinctions. Some make a difference in their instructions, according as the long or the short forceps is to be used; others treat

of both in the same words. So greatly unlike are their descriptions of the proper way of introducing and managing the blades, of the direction of the handles, etc., etc., in any particular presentation, that a reader would not suppose they were treating of the same case, or even the same subject.

What is the reason of these discrepancies and this confusion? Truth is always simple. The handling by learned and experienced men of a subject so long familiar to the profession as this has been, ought to exhibit the simplicity, uniformity, and exactness of scientific truth. It exhibits in our leading authors none of these qualities. The cause is that the principle with which they start, and on which their reasonings and descriptions are based, is essentially and totally erroneous. It is *not* the presentation that should govern the mode of application. However the head may present, the law that should govern the position of the blades is one and the same.

That law is, that the pelvic curve of the forceps shall follow and coincide with the utero-vaginal curve.

For what purpose, let me ask, is the pelvic curve given to the long forceps, unless it is to accommodate the shape of the instrument to the anatomy of the mother? It is only a single line of direction that this curve can fit; that is the line of the pelvic axis, and it will bring the blades symmetrically against the sides of the pelvis, with the convexity of their pelvic curves following the bend of the sacrum. The curve of the sacrum and of the vagina and the resistance of the floor of the pelvis, elements so powerful that in every labor we see them change the direction of the head by more than a quadrant of a circle, must be fully regarded, not only in the form of our instrument, but also in the position in which it may be placed in the utero-vaginal canal. Obvious as this would seem to be, I look in vain among the authors within my reach for the due acknowledgment of its importance.

I assert that till the head is actually at the outlet of the pelvis it is substantially impossible to apply the forceps in any other than the manner I have indicated. A slight deviation of the

instrument toward an oblique diameter I admit to be possible, but its own shape and the laws of mechanics confine that deviation within narrow limits. How can you place the blades along the parietal bones when the plane of those bones makes an angle with that part of the pelvic axis in which the head is situated? Or how can you, without undue violence, lay them there when their pelvic curve must widely divert from and antagonize the curve of the maternal passage? The curve of the vagina still exists even when that canal is dilated to permit the passage of the head: can it be disregarded in the mechanics of forceps delivery? If we compare the distance, following the sacral curve, between the posterior commissure of the vulva and the posterior edge of the pelvic brim, with its anterior counterpart, it will be obvious that the blades, one following one line and the other the other line, cannot be brought squarely and symmetrically to embrace the head, without forcing their handles violently back to the very coccyx. Nor, when the head is at the superior strait, can it be done even thus. Nevertheless, these are the virtual impossibilities that authors and lecturers, in the most matter-of-course way, call upon us to perform. They hardly ever suggest a difficulty or a doubt. Their language would make one think that the forceps can be played about in the female pelvis, with its pelvic curve bulging this way or that, as freely and easily as in an india-rubber bag or in a barrel.

To cap the climax of absurdity, our professors illustrate their instructions on that most useless and preposterous of all human contrivances, called by Dr. Meigs, with unconscious appropriateness, "the Phantom." I well remember, as a pupil, spending hours over that effigy, learning, as I innocently supposed, to apply the forceps to the sides of the head when it presented in this, that, and the other position. Nothing could be less like nature, and nothing, therefore, could be less instructive. It was like breakfasting on the morning fog. You might as well practice passing a catheter on the town-pump.

I admit that when the head is at the pelvic outlet, the forceps may be applied to it in any other diameters of that outlet. But

even here the blades are best applied to the sides of the pelvis; for only thus will they be in symmetrical and easy relation to the maternal parts. The application of them in an antero-posterior position, or in a position approaching that, involves straining back the perinæum in a painful and injurious manner, and threatens harm to the soft parts that underlie the pubis. For these evils this mode of application has no compensating advantages.

I shall be asked to reconcile the position I take in this matter with what authors represent themselves as doing. I prefer not to undertake to do this. When a man describes the application of the blades of the forceps antero-posteriorly at the upper strait, he describes what is impossible. Let me add that many times operators deceive themselves with regard to the direction in which the blades are passed; and many times authors, in their descriptions as well as in their maxims, blindly follow the beaten path.

If I am deemed guilty of unwarrantable audacity in speaking thus of our obstetrical authorities, I shall shelter myself behind the quotation that I have already made from Professor Simpson. If Burns and Dewees and Churchill describe impossible processes, and even sketch them for the engraver, as he says they do, why may not the most modern book-makers err in the same way? I am of the opinion that they do so err. I think, moreover, that it is entirely proper for any practitioner to repudiate authorities that are so utterly inharmonious as those that now bear sway in this matter of the application of the forceps.

Professor Elliott, though he follows the rest in instructing us to obey the presentation and apply the blades along the sides of the head, betrays the idleness of the rule when he says, page 300: "In difficult applications they will generally be applied over one of the oblique diameters of the fœtal head." Inspection of the head, after delivery, will show that they almost invariably lie upon the head in this manner, and almost never along the parietal bones.

An inspection of the cuts for illustrating forceps delivery that

are to be found in treatises on midwifery, will show that the representation of impossibilities with which Professor Simpson charges Churchill is sometimes avoided by making the picture entirely inconsistent with the text. An application in an oblique diameter of the pelvis is described in the text, while the illustration of the forceps in position represents the instrument laterally applied, the locked handles being unmistakably in the plane of the transverse diameter of the pelvis, and resting squarely against the perinæum. The fact is, that a properly constructed blade of the long forceps, when once engaged between the head of the child and the wall of the vagina and pushed home along that canal, has, from its very shape, so strong a tendency to settle into the position to which alone its double curve is adapted, that only the perverse misdirection of ill-taught and violent hands can make it go astray. This is the reason why the young accoucheur, after repeated but futile efforts, has often found his instrument strangely and unexpectedly slip into its place just when he was despairing of success and had almost ceased to try.

It is easy, too, for older operators, when the greater part of the blade is buried out of sight in the pelvis, to be deceived with regard to the direction it is taking, double-curved as it is, and to erroneously believe that its whole course is on the line which it began.

There are two ideas whose influence seems to have kept the minds of obstetric teachers fixed on always aiming to apply the blades of the forceps to the sides of the child's head. The one has relation to the safety of the child, the other to facilitating delivery by getting hold of the head endwise. In regard to the first, it is true that the blades so applied will "fit" somewhat better than when applied in any other diameter, but the head is so near a globe in its form that the difference in the fit or in the security of the hold is not material. The immunity of the child, in bone or feature or viscus, is never endangered by the proper use of the forceps. The obstetrician whose instrument disfigures the new-comer is a bungler whose only excuse is that he was taught in a bad school. Forcing the end or the edge of the

blade into the child's tender flesh is a barbarous result of that stupid idea in obedience to which we are told to *compress* the head in order to diminish its size or to prevent the instrument from slipping from its hold.

I shall, of course, admit that the head will pass easiest endwise; but I deny that the forceps can always be applied parallel with the long diameter of the head and along the parietal bones, and thus insure that facility. Whatever can be done by this instrument toward bringing the head into the most favorable position for delivery or toward directing its progress, will be best done by applying the blades symmetrically along the sides of the pelvis, fixing the head between them as in a frame, and having it thus under control, giving to it whatever change of position or direction may be advantageous and possible. It will certainly be much easier to give your locked instrument a departure from mesial and symmetrical relation with the pelvis than to place the blades separately in that departure. It is safer, too; for the locked blade can move only with its fellow and with the inclosed head. Even in the most untaught or incautious hands, its end or its edge can now do little harm. The locked forceps, applied in symmetry with the pelvis, may be regarded as an absolutely innocent instrument. With the inclosed head it may glide, or turn, or roll in the pelvis to some small extent, but it cannot jam, or cut, or tear, or bruise the maternal parts.

If it be true, as I have endeavored to show, that the obscure, complex, contradictory and multiform rules of the books are based on an erroneous principle, their abrogation is of the highest importance. Even if they were sound, their multiplicity and variety would make it impossible to remember them, while their obscurity would often make it difficult to understand them. When to this we add that their correct application presupposes that the practitioner can make himself sure of the presentation, which for most of us is often difficult, and for many of us sometimes impossible, it needs no argument to show that under their guidance the young obstetrician is indeed in pitiful straits.

Whose heart does not sink at the remembrance of his own first forceps case? Let the scene come back. His mind already possessed by the bugbear of the danger and difficulty of the operation, the novice first gropes and studies and sweats over the diagnosis of the presentation. Only partly sure of this, he next endeavors to find in his memory the special rule of the case. It is strange that, with such a mixed sea of authorities on this point as the books present, the endeavor is often vain? Nevertheless, he must go on. This is no time for delay or hesitation. He enters a blade. Practical difficulties now meet him. The blade will not go to its place. He is balked. Fears possess him. He doubts the correctness of his diagnosis, he doubts his memory, he doubts his skill. Confiding youth! it never occurs to him to doubt the soundness of his teachers. He begins to fear that he shall harm his patient; lacerations, ruptures—God knows what!—rise before his mind. He withdraws his instrument. He tries again, and perhaps by chance succeeds; or failing a second and a third time, he sends for counsel, to find it perhaps as helpless as himself; or, no professional aid being within reach, he makes shielding excuses to the friends of "contracted pelvis," or "slipping instruments," or "abnormal bulk of head," and resorts at last, more to be pitied than blamed, to the deadly perforator.

Is not this a true picture? And must not that young man be sustained by an exceptionally courageous heart who ventures to take his forceps in hand, save on the pressure of dire necessity, or of that public opinion of the lying-in room which, direr still, call upon him to show himself equal to every emergency, or to prepare to meet the sidelong glance of distrust, and even the pointing finger of contempt?

6th. *The manner of introduction.*—The principle of applying the forceps according to the presentation being thus proved to be illusory and impracticable, it remains to substitute for it a rule to which the obstetrician may safely trust in this important operation. Such a rule, simple to understand and easy to follow, is, in my opinion, not difficult to find. It is, that, in con-

ducting the blades along the pelvic passage, and in grasping with them the head of the fœtus, we shall disregard entirely the presentation, and have regard only to the curve of the vagina and the contour of the pelvic cavity. The mind's eye must simply see a rounded body lying in the utero-vaginal canal, while the hand, obeying the anatomy of that canal, directs each blade of the forceps so as to pass around and embrace it.

Let this be established as the rule, and the operation becomes free from complications. It is no longer necessary to remember the endless variety of rules with which authors are filled. One simple law is in all cases to be followed, but two anatomical elements are to be held in the mind, and a uniform manipulation is to be executed.

It is, moreover, no longer necessary, as a preliminary, to ascertain the presentation. If there are those who assert that this is no bother, and who set me down as wanting the *tactus eruditus*, I shall simply ask them what they will do with the table given in Simpson's Obstetrical Works, ser. I., p. 414, according to which the ratio of occipito-posterior presentations to other presentations found by different experts, varies from 1 in 1336 to 1 in 3 or 4? or with the table given by the same author on the next page? I dare to assert, that if it be necessary to know the presentation before applying the forceps, the old rule of waiting till you can "feel the ears," is still a sound one.

I am well satisfied that the operation is in fact usually performed, sometimes intentionally and sometimes unintentionally, on the principle that I have laid down above, and I confidently believe that my position will not need to be supported by authorities in the judgment of men of experience. But it is still necessary to introduce the doctrine into the books, and lay it before the generations of learners. It is for those that have the art of the forceps still to learn that I write.

If it be true, as indicated by Cazeaux, that this simple and easy rule of practice is somewhat generally followed in Germany, the fact will explain what we find in the statistics collected by Churchill (Midwifery, p. 339 *et seq.*) It seems that the German practitioners there mentioned resort to the forceps nearly

three times as often as do the English. It explains, too, why, as we are told by the same author, the Germans report a very small proportion of crotchet cases, and a very small fatality among children after the forceps.

Let us now approach the bed-side of the patient and proceed to perform what has properly been called the "obstetric miracle."

The first question that arises is: Which blade shall first be introduced? In regard to this little matter, singular obscurity and confusion will be found in authors. The individual blades are variously and loosely designated as the "upper and lower," "right and left," "male and female," "anterior and posterior," etc., and I nowhere find a uniform law of precedence clearly laid down. Such a law is nevertheless easily pointed out. That blade is to be entered first, which, when both are introduced and crossed, will be next the posterior commissure of the vulva. A moment's inspection of the lock will show which this is. It may most properly be called the posterior blade, and, as the forceps are commonly constructed, is that one that must find its place in the left half of the pelvis.

Now, while the operator with one or two fingers of his right hand supine touches the scalp well back toward the sacrum, let him take this blade near its center of gravity with the fingers of the left, and holding it nearly perpendicularly, but a little inclined to his own left, slide it into the vagina along the palmar surface of his hand till its extremity is engaged between the head and the maternal parts. From this point it is not the touch of the operator, but the imagination, the mind's eye, informed by anatomical knowledge, that must guide his motions. While he gently pushes along the blade, he must remember both the oval of the head and the bend of the vagina, and both the cranial and the pelvic curves of his instrument. He must remember, that while the point of his blade follows the utero-vaginal canal, it must so follow it as to bring its flat concave, not behind, but alongside the head, and its concave edge under the os pubis. In order to accomplish this double indication, the handle, as the point of the blade advances, must describe an intermediary be-

tween two curves. While it comes backward toward the operator and downward, it must also go outward toward his left and downward, and must describe in each of the two curves near a quarter of a circle. In other words, while the blade in respect of its cranial curve obeys the contour of the head, in respect of its pelvic curve it seeks the bend of the pelvic passage, and in order to adapt itself simultaneously to both, it must follow a spiral that contains them both.

In order that the young obstetrician may study the movement of his blade in detail and guide it most intelligently, it may be well for him, holding it as above described, at first to follow with its extremity simply the curve of the child's head, bringing the handle backward and downward, but not outward. As the blade advances deep into the pelvis, its convex edge will come to press against the right side of that cavity, its pelvic curve antagonizing in part the utero-vaginal curve, and the strain will resist its further progress. Now let him add to this movement obedience to the pelvic curve, by carrying the handle also outward and downward, and this convex edge will be turned gradually toward the sacrum, with whose curve its own contour is in harmony, and the before reluctant blade will glide along as if by instinct. Thus enlightened by watching his own progress and seeing the reason of it, the dullest disciple will hardly find difficulty in accomplishing the subsequent steps of the introduction. Whenever the onward progress of the blade is resisted, he will almost invariably find it due to an excess of one of the two above-described elements of the combined or spiral movement; and gentle trial of them separately will show him in which direction easy progress lies.

The double or spiral movement described is to be carried on till the handle is brought into the mesial plane of the body and firmly back against the perinæum. The novice will be surprised at the length of the road he has to travel. Let there be no fear of passing the blade too far. There is no danger of doing this. After surmounting the convexity of the head, the end of the blade will necessarily approach the mesial line, and

its impingement upon the body of the child will arrest its progress at the proper stage. From the opposite error great evils arise. From not carrying in the blades far enough it comes that they refuse to lock, and that their ends may be made to cut the scalp or gouge out the eyes, or may slip from their hold. The second or anterior blade is to be passed to its place in precisely the same way, *mutatis mutandis*, as the posterior blade.

The introduction of the hand into the vagina is recommended by some authors (Bedford, for example), for the purpose of guiding the blades of the forceps, is an entirely superfluous piece of barbarity. The obstacle that often resists the onward motion of the blade is not a fold or cul-de-sac of the soft parts, whether of the mother or of the child. It is some false direction of the blade; and it usually and naturally results from the attempt of the practitioner to follow the erroneous rules laid down in the books. In my opinion there is no danger of punching a hole through the utero-vaginal cul-de-sac. When the end of the os is beyond reach of the finger, it has so far disappeared into the adjacent walls that the extremity of the blade is in little or no danger of catching outside of it; and whatever danger there may be, is easily obviated by hugging a little the head of the child. The fear of punching off the ears of the child or of peeling its head, which are expressed by some authors, is not deserving of attention.

Most authors direct the first blade, when introduced, to be given to an assistant to be held in place. This is generally unnecessary. When the blade is pushed to its proper place and its handle carried well back, it will stay there.

7th. *Locking.*—Probably there is not one of my readers that, in his first essays with the forceps, did not have great trouble in making the blades lock. Even with experienced accoucheurs this is one of the most common and embarrassing of the difficulties that are met with. What solution of it is furnished by authors? None, or worse than none. The best they have to suggest is, to withdraw one blade or both, and try again. This is a sort of "scribe" rule, "cut and try" or "rule of thumb,"

that does no credit to a learned and a scientific profession.

Cazeaux recommends, in addition, that when one or both blades "turn outward," "the handles shall be grasped by the whole hand." What this means, unless it be an attempt to *force* them into place, it is not easy to see. If it means that, it is a vile rule. Dr. Bedford lucidly informs us, page 588, that when the blades have embraced the head, the accoucheur will be able, "by judicious manipulation" to lock the forceps! This is highly instructive! What is "judicious manipulation?" The whole operation of the forceps is done by "judicious manipulation." Professor Meigs, page 558, speaks of "pushing" the blade this way and that in order to bring it into a position to lock. These are fair samples of the guidance that the practitioner will find in the books in this important emergency. It is in default of better instruction that in our early trials we introduce and withdraw the instrument again and again, and, it may be, utterly fail at last. I cannot think that men who can furnish no better rules than these fully understand the forceps. I believe that two simple precepts may be given that will almost invariably secure quick and easy success in locking the blades. These are, to push the blades far enough along, and to carry the handles far enough back against the perinæum. The first step places the blades fairly upon the head, the second carries them back into the axis of that part of the utero-vaginal curve in which the head is situated; and, the blades being now symmetrical to each other, the handles must necessarily cross each other in the same plane, and will, therefore, lock. All ordinary cases of failure to lock, provided that the blades are laid anywhere in the neighborhood of their proper place, are due to deficiency in one of these particulars. These two steps of final adjustment, it will be observed, are but the continuation and completion of the process of applying the blades which I have already described; but their exactitude may properly be left till both blades are introduced and crossed, when, if they do not lock, the fault almost always will be found to be in the incompleteness of one or both of these steps. In dispropor-

tionately roomy pelves, the course and position of the instrument not being normally controlled by the shape of that cavity and of the head, one or both of the blades will sometimes need to be slided toward the pubis. A deformed pelvis may make another exception to the sufficiency of the rules above given.

8th. *Are the forceps liable to slip?*—This is an important practical question. The reader will observe that in a considerable number of cases in Dr. Elliott's "Obstetrical Cliniques" the forceps "slipped." Professor Meigs is so much afraid of this accident that he directs us to keep the finger against the head of the child in order to detect its incipience. In short, nearly all of our standard authors warn us against this danger. My forceps never slip, and in the face of these authorities I unhesitatingly assert, that in all ordinary proportions of the head and pelvis, with decent instruments correctly applied, the danger of slipping is wholly imaginary. Properly embraced between the blades, the head no way tends to slip from between the edges, either forward or backward; nor is there room for it to do so. Equally impossible is it for their ends to override the bulge of the cranium and let them come back to us empty. They must do this simultaneously if at all, and this will involve such wider separation of their bellies as the limits of the pelvic cavity do not admit. They certainly cannot slip over the head and come away without occupying more room in their void grasp than they would in bringing the head along with them.

When the forceps slip, it is because the blades are not passed far enough to truly embrace the head. Their ends rest against it, on or near its bulge, instead of reaching nearly or quite to the cervical region. This is the explanation of all the cases of slipping that I have ever seen, or can imagine. The instrument slips off because it has never been on. The question is important, not because the slipping of the blades can do any material harm, but because the apprehension of it is sure to lead to the wicked practice of violently

9th. *Compressing the head.*—So far as the danger of slipping is concerned, I think I have shown that this is entirely unneces-

sary. The degree of compressing force that is necessarily used in grasping the instrument is all that is required, in any permissible exercise of extractive power, to make sure the hold of the forceps when properly applied, even in a disproportionately roomy pelvis.

But our authorities, moreover, with a good degree of unanimity, instruct us to compress the fœtal head in order to promote its elongation, and thereby facilitate delivery. Indeed, according to Professor G. S. Bedford (Principles and Practice of Obstetrics, p. 575), "accoucheurs are divided as to whether the forceps acts principally as a compressor or an extractor." I can but regard this doctrine as erroneous and singularly unreasonable. The compression of an elastic body, while it diminishes one diameter to it, necessarily tends to increase all the diameters that are at right angles to the compressing force. Now it is obvious that there will seldom or never be need of reducing that diameter of the head which the blades of the forceps subtend, and which alone they can directly act upon. The contained must be less than the container, and the very fact that the blades have been passed around the head at the point where it has been stopped, is almost conclusive proof that in that diameter there is room enough. The obstacle, then, must be in another diameter of the head, and compression tending to increase that diameter, must tend to increase the obstacle. For example, it is seldom that a narrowing of any other than the antero-posterior pelvic diameter requires the application of the forceps at the superior strait. (*Vide* Simpson, *op. cit.*) But this diameter, as I have already shown, cannot be subtended by the forceps; they can only be applied in a diameter nearly or quite at a right angle with it; and whatever compression they are made to exercise upon the corresponding dimension of the head, necessarily tends to increase that dimension that lies in the narrowed pelvic diameter, and thereby to increase the difficulty of the case. Whatever elongation of the head may be effected by compression, is no compensation for this evil; it is obtained at the expense of an increase potentially of the very

cause that demands the forceps. The resistance of the maternal parts to distention is the influence on which we must alone rely to promote elongation of the fœtal head.

Whoever is taught to use compression, either to promote security of hold or elongation of the head, will be pretty sure to overdo the matter, and will be in great danger of inflicting serious injury on the child. The iron levers give great power, and in the excitement of the moment that power is sure to be used. Such warnings as Churchill gives, "to limit the force used to what the head can bear without injury," are entirely useless. The benumbed and wearied muscular sense would deceive the best judgment. The injuries that the forceps are capable of inflicting, not simply on the child's scalp, but by compression upon the bones and even the viscera of its head, are well illustrated in Elliott's Obstetrical Cases, pp. 245–246, 255–271. On p. 246, Dr. E. "changes his forceps in order to use compression with more effect." So far as the child was concerned, the "effect" evidently might have been spared.

10th. *Extraction.*—It would hardly seem to admit of dispute that the extractive power of the forceps ought to be used in imitation of nature, and accordingly, in the direction of the expulsive action of the uterine and abdominal muscles as modified by the lines of the pelvic passage. Nevertheless, for some incomprehensible reason, we are told by Professor Bedford, that the force exerted by the obstetrician should be "one-third extractive and two-thirds lateral." This is also substantially the advice given by Professor Meigs and other popular authors on midwifery. Such management of the forceps is not in imitation of nature. Nature does not seesaw or wriggle her burden along. Were the walls of the passage as dry, friable, and inelastic as those of a port-hole, or were the fœtal head so rough and angular as to readily secure a bearing on those walls, this *prying it* out would not be unreasonable; but in reality its oval and gliding surface cannot be hastened along its lubricated and elastic road by working it from side to side. True it is, that if our first efforts at moving the head along fail of success, we

may properly direct our subsequent tractions, tentatively, a little this way and that, distrusting the correctness of our judgment as to the exact law of the case, and thus learn to aid aright the vis-a-tergo. With this exception, based on the imperfection of human judgment, traction is the only function of the forceps.

It has seemed to me that the common conception of the movement of the fœtal head through the pelvis is somewhat erroneous in a very important particular. That traject is far more curvilinear than is commonly supposed. If we compare the distance traveled by the part that emerges from under the pubic arch with the distance that must be traversed by the part that follows the curve of the sacrum, we shall easily see that the head is rotated on the symphysis pubis almost as on a pivot. This must be borne in mind in our extractive efforts; and, at a point to be determined by our judgment, but earlier than is commonly supposed, they should be directed rather to *roll out* than to draw out the head.

The rules that I have thus laid down, especially those for the introduction and locking of the forceps, are sanctioned not alone by my own experience and judgment. More than one of my younger professional brethren have thanked me for my suggestions to them in this matter, and assured me that they had made easy to them an operation that had always before been embarrassing and difficult. I now submit these opinions more publicly to the profession. If my expression of them savors somewhat of disrespect for authority, I trust it will be pardoned. In practical matters of this sort we are far too much governed by authority. I believe I shall have the consent of the great body of our profession when I say that in many other particulars our literature needs a thorough overhauling. It needs it in order to the substitution of simplicity and clearness for complexity and obscurity; to the settlement of questions disputed but not disputable; and to the getting rid of rubbish that has the rottenness as well as the respectability of antiquity. *Am. Jour. Obstet.*

ART. II.—CHLORIDE OF AMMONIUM A SPECIFIC IN HEPATITIS AND HEPATIC ABSCESS. By WILLIAM STEWART, M. D., Surgeon, Twenty-first Fusiliers.

Chloride of ammonium has been for a long time used by the Germans in frequently-repeated small does in hepatitis, and both the Germans and French esteem it a valuable remedy in many diseases in which we either employ mercury or other alterative deobstruents. Morehead, in his researches, in a footnote, states that he has no experience of the remedy, but says the Indian practitioner will do well to try it. Dr. Clement Williams, now of Mandalay, formerly in the 68th Light Infantry, and first Political Agent at Mandalay, informed me that, when in his regiment, he was in the habit of using the chloride of ammonium in hepatic affections with marked success.*

Should a more extended trial in other hands, and in other parts of India, under a variety of climates and circumstances, contribute, on the whole, to like favorable results, the much dreaded suppurative hepatitis may be as effectually controlled and cured as its twin associate dysentery, by the reintroduction of the ipecacuanha treatment in large doses—thanks to the labors of a few Army Medical Officers. . . .

When hepatitis occurs in an individual of good diathesis, and is seen early and met by judicious treatment, the symptoms, local and general, will for the most part gradually disappear, and the patient be restored to health. It is found, however, in actual practice, that in consequence of bad diathesis, advanced stage, or other cause, recovery by resolution does not take place, suppuration occurs, and hepatic abscess is formed. It is of importance to detect this event promptly and without hesitation, and to mark its progress, because it calls for a line of treatment different from that suitable to the antecedent stages. In the

* Most systematic writers on the practice of medicine, in treating of hepatitis, make no mention of chloride of ammonium in its treatment; a few allude to it cursorily among the medicines which have been recommended in chronic hepatitis (cirrhosis) (Watson, Tanner), or as an eliminant when suppuration has taken place (Morehead), or merely as a mild tonic in hepatitic abcess (Copland).

earlier stages, the antiphlogistic regimen and treatment are indicated according to the acuteness and severity of the symptoms, local and general, and the constitution of the patient. . . .

During this time, the patient must be confined to bed, with strict attention to diet, carefully watched, and any derangement of secretions corrected by gentle means. But the symptoms, instead of being removed, may be only moderated by the above treatment; exudation of plastic lymph may have taken place, degenerating into pus and terminating in abscess, the deranged state of the capillary circulation in its immediate neighborhood preventing its removal by absorption.

On the other hand, it frequently happens, especially in military practice, that the disease does not come under treatment in the early stages, and not till the peculiar symptoms pointing to abscess, either impending or already formed, are manifested. In either case, the treatment above described as suitable in primary acute hepatitis is no longer indicated; the treatment must now be tonic and restorative—the diet should consist of milk, light puddings, broths, or animal jellies, and wine or other stimulants may be cautiously administered, if these do not excite the pulse, or produce irritation of the gastro-intestinal surface.*

At this period of the disease, when the acute symptoms have been allayed, and suppuration is either threatened or already established, or, in the event of the patient having come under observation in the primary acute stage, as soon as the symptoms, local and general, shall have been abated, and diaphoresis freely established by the means already described, the chloride of ammonium should be administered in doses of grs. xx. morning and evening, noting carefully its effects, which are striking and remarkably regular in the order of their occurrence.

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* Chloride of ammonium, being itself a general stimulant, does away with the necessity for the employment of alcoholic stimulants, in the considerable quantities otherwise required; and, unlike them, exercises, I believe, a specific therapeutic action on the liver, instead of tending to increase the diseased condition which it is our object to remedy.

As a general rule, about fifteen minutes after taking the medicine, the patient experiences a sensation of warmth in the epigastrium, which by-and-by extends, pervading the abdomen, and gradually becomes diffused over the entire cutaneous surface. The nervous system is at the same time exhilarated sympathetically, and probably also through the circulation, for the patient now feels "light-headed" (as he generally expresses it), and at times drowsy. The acute pain previously experienced in the right hypochondrium and along the margins of the lower right ribs, extending, as the case may be, forward across the epigastrium, or backward to the lumbar region, is either entirely removed, or in its stead pain is sometimes referred to a point higher up, and toward the base of the axillary region, where before none was complained of. At this stage of the operation of the remedy, the patient often falls asleep relieved of all his distressing symptoms.

After the lapse of another quarter of an hour, a free and equable perspiration takes place over the entire surface, which lasts for a period varying from one to two hours; in the meantime, the pain, which had shifted from the lower margins of the inferior ribs of the right side, will again manifest itself at or near its original position, or may be referred to one totally different, as the lumbar region or even the right hip. With the evening dose similar effects will be observed to take place with like regularity and certainty; and with each succeeding one, the interval of relief from pyrexia and pain referred to the part affected, as well as sympathetic pains of the shoulder, arm, etc., (which latter are at times distressing), will gradually become longer, till at length, in favorable cases, the relief becomes complete and constant. After several doses of the medicine, the urine is much increased in quantity (particularly in the cold season), is limpid, and passed without uneasiness. The increase is chiefly at night, causing the patient to awake suddenly, perhaps three or four times, for the purpose of micturition.

After a few days the appetite is much improved, and patient craves for more food, which may be given, provided it be light,

nutritive, and easily digested; but solid food should on no account be permitted, as its ingestion would in all probability provoke a recurrence of all the acute symptoms.

During the use of the medicine, care must be taken that patient does not catch cold when perspiring; and when perspiration has ceased, the surface should be dried with warm towels, otherwise chill may be experienced. . . .

Dr. Stewart reports several instructive cases, and adds:

It may be interesting to note the number of grains of the medicine administered, in the treatment of the 31 cases of hepatitis, in the Hospital 2-21st Fusiliers, from 1st September, 1869, to 31st May, 1870, taken from a record kept by passed hospital apprentice, M. Devanboo, attached to the battalion.

| | |
|---|---|
| Total number of grains . . . . | 21,926 |
| Average number of grains administered to each patient | 707.07 |
| Maximum do. in any one case (*abscess of liver*) . . | 2,490 |
| Minimum do. (*hepatitis*) . . . | 120 |
| Average do. exhibited to each patient in six cases abscess of liver . . . . | 1,428 |
| Average do. in twenty-five cases simple hepatitis* | 569 |

It will be seen from the above figures that the medicine is used pretty freely, and that in some cases very large quantities have been required; in fact, its use should be persevered in till its sensible effects be no longer manifested, or only in a slight degree; and it is well to continue it for some time afterward in smaller and more frequently repeated doses, in the event of liver enlargement, with feeling of stiffness, weight, or other uneasiness continuing.—*Pamphlet forwarded by Author.*

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ART. III.—ON THE MANAGEMENT OF THE PERINEUM DURING LABOR. By WM. GOODELL, M. D., Clinical Lecturer on Diseases of Women and Children in the University of Pennsylvania. ("American Journal Medical Sciences," 1871.)

[The first portion of the paper is an admirably exhaustive

* Several of these were strongly suspected to be cases of latent and deep-seated abscess.

study of this important subject, but the great length of the article necessitated our simply abstracting the Doctor's own suggestions.—ED. JOURNAL OF OBSTETRICS.]

Although I believe that the vast majority of natural labors require no assistance whatever to insure a safe delivery, provided the woman has escaped frequent touching, yet cases do undoubtedly arise which demand intelligent assistance, nor can we always draw the line of demarcation between natural and morbid cases. And let me remark *in limine* that, by laceration of the perineum, I mean any solution of its continuity, be it small or great. For the loss of every fibre entails a corresponding loss of power in the floor of the pelvis, and a consequent impairment of support to the reproductive organs. Where assistance seems demanded to prevent any laceration, the method which I adopt avoids all pressure upon, and direct support to the perineum, and I can the more confidently recommend it, because I make it a rule to have the perineum decently exposed to view, whenever there arises any fear of laceration, and not the slightest fissure can escape my notice. The prudery of obstetric teachers has, I am sure, been the cause of many undiscovered, and consequently uncured lacerations. But why should a false delicacy interfere with the freedom of manipulation, at a time when a woman's future health and happiness lie at stake, especially since her organs are then no longer *sexual*, in the common acceptation of the word, but *parturient?*

Whenever, therefore, it seems proper to aid nature, insert one or two fingers of the left hand into the rectum, the woman lying on her left side, with her knees well drawn up and separated by a pillow, and hook up and pull forward the sphincter ani towards the pubes. The thumb of the same hand is then to be placed upon the fœtal head, scrupulously avoiding all contact with the fourchette. The right hand need not remain idle, it assists the thumb in making the head hug the pubes, or in retarding its advance; after a pain it presses back the head from the perineum, and thus represses reflex uterine action; it restrains the movements of the woman; it pushes up the corru-

gated scalp, so that no folds shall remain beneath the sharp edge of the perineum to increase the circumference of the child's head; finally it supports the emerging head and body, causing them to describe the curve of Carus.

I claim for this method the following advantages: (*a*) By pulling up the sphincter ani towards the pubes, not only is nature imitated, which always dilates the anal orifice, but the perineum is brought forward without direct pressure, and its dilatation is diffused over its entire surface, causing a corresponding relaxation of the strain on the posterior commissure in the line of its raphè. In addition, its muscular fibres are crowded up to, and consequently strengthen the line of greatest tension; just as a prudent general hurries up reinforcements to the point of attack. (*b*) The same force which dilates the sphincter ani compels the occiput to hug the pubes and favors extension, especially if the fingers in the rectum are hooked over the prominences of the fœtal face or over the chin. (*c*) This aid is not liable to sudden interruption, for however restless the woman may be, the thumb and fingers, once well applied, follow her movements without relaxing their hold. (*d*) The thumb of the left hand, together with the fingers of the right, can, by direct pressure upon the presenting part, restrain its too rapid advance, without exciting reflex uterine contraction. (*e*) The circulation of the blood is left free; the nerves are not benumbed by pressure, and the perineum therefore continues in its normal condition, that of a living, elastic, and sentient tissue. (*f*) After the parts attain their maximum dilatation at the occipito-bregmatic circumference of the fœtal head, it is, in my experience, as well as in that of Sacombe,* the rapid springing back of the fourchette over the projecting nose, or the subsequent rapid expulsion of the shoulders that often produces lacerations. These causes are, however, well controlled by my method, in the former instance by merely pulling forward the sphincter ani, in the latter, by adding the support of the right hand to

* Gardien's Traité d'Accouch., vol. ii., p. 505.

the emerging shoulders. Indeed, so effectively do the fingers in the rectum raise the perineum, that the gliding backward of the posterior commissure during the last throe, can, at the will of the physician, be arrested at the bridge of the nose, to be slid off after the cessation of the pain. Finally, as the dilatation of the *ostium vaginæ* is made at the expense of the labia, which are attached to the anterior aspect of the pubic rami and symphysis below the *mons veneris*, much advantage will be gained, both by compelling the complete extension of the head, before its delivery, and by carrying forward the perineum in order to *approximate the fourchette to the level of the symphysis*, whence its fibres spring. By comparing a fœtal skull with the female pelvis, it will be seen that its sub-occipital region cannot impinge upon the apex of the pubic arch, but must subtend in it as its chord; a vacant space will therefore remain in which the urethra lies secure from pressure. It is only after the head is out of the inferior strait, and completely extended, that its sub-occipital region comes into direct contact with the pubic symphysis, and that on its anterior aspect. If one leg of a compass be placed on a symphysis, and the other upon the bregma of the child's head, at different degrees of extension, it will be seen that the distance from the bregma to the pubes diminishes in proportion as the head is extended, and is least when the sub-occipital region actually touches the anterior aspect of the symphysis, as it does in complete extension. It follows, therefore, that if the head be well extended before its delivery, the greatest dilatation necessary for the *ostium vaginæ* to undergo, will be measured by the occipito-bregmatic circumference *only*, whereas, if the head be delivered before extension is completed—as it is apt to be, unless the fourchette is approximated to the level of the pubes by the two fingers in the rectum—this dilatation must be increased by the addition of the circumference of the space which will exist between the pubic symphysis and the sub-occipital region.

Before adopting this method of managing the perineum, but not since, I have often found occasion to apply the forceps in

order to extend and deliver the head, when the *ostium vaginæ* was rigid, or the perineum too unyielding for the pains. I do not however, wish to be understood that the use of the forceps is to be abandoned at this stage of labor; for the forceps will be urgently demanded whenever the vertex bears too much upon the perineal centre, threatening perforation, and I can readily foresee occasions when a force may be required greater than that which can be prudently exerted by the two fingers in the rectum. A perineum is unyielding, or an *ostium vaginæ* is rigid, either because, according to Cazeaux, the perineal muscles are in a state of spasmodic contraction; or because, according to Hewitt, the expulsive pains are disproportioned to the amount of resistance made by the perineal valve. In the latter the forceps may be demanded; in the former very rarely indeed.

During a pain the perineum is tense and inelastic, like the os uteri; in the interval it relaxes and becomes flaccid. Acting on this hint, in case of rigidity, I am in the habit of seizing the moment of greatest relaxation, that is, immediately after a pain, to enucleate the head by hooking the two fingers in the rectum over the chin, and, at the same time, by gently sliding back the perineum over the parietal bosses. In cases where the pains followed in too rapid succession to admit of this manœuvre, or the woman was too uncontrollable, or the parts too rigid, I have successfully resorted to full anæsthesia.

There is yet another point which experience has taught me. When the perineum is thin and elastic; when the head advances with a pain and recedes at its subsidence, there is not much danger from laceration. On the contrary, when the perineum is thick, or rendered doughy by a deposit of fat; when it is not elastic, and the head does not recede at the subsidence of a pain, it shall hardly escape laceration, if left to nature. In such cases as the latter, whenever the crown of the head begins to appear in sight, and does not recede after a pain, I try to imitate nature by pushing it back, so that the next pain may expend a portion of its force in recovering lost ground. This measure appears to me to be more in accordance with the teach-

ings of nature than is the progressive traction of the forceps.

Delivery by the forceps, even in skillful hands, will often produce laceration; for the head is apt to be brought down too quickly upon the unprepared soft parts, and it becomes a very nice point indeed to determine the exact moment when delivery may be terminated with impunity. The most cautious physician is apt to be caught, as it were, "on the centre." He sees the perineum stretched out to a perilous thinness, and the fourchette almost cracking under the strain. In doubt whether the moment has arrived to raise the forceps handles and turn out the head, or to depress them and thus restrain its advance, he wavers, and in a twinkling the fibres part. On the other hand, the impatient physician is tempted to turn out the head before the parts are sufficiently dilated. Finally, what is still more frequent, *hinc nihi lachrymæ*, at the last moment the physicians' courage fails him, and he depresses the forceps handles just as the head has begun to emerge; a course equally fatal to the integrity of the perineum. Impressed by these difficulties, so soon as the perineum is well distended, I now take off the forceps, unless their withdrawal requires a force which might accelerate delivery, and either let the woman deliver herself, or else enucleate the head in the manner before described. This practice, if not the more brilliant, is in my hands the safer.

The question now arises whether it is ever justifiable to incise a rigid perineum. In cases of broad and distorting cicatrices resulting from burns, sloughs, abscesses, etc., it may be absolutely necessary to do so, as the only alternative for lessening the bulk of the child's head. But in a perineum rigid *per se*, it seems to me that the necessity for such a course would hardly arise. In the first place, how often, without snapping a single fibre, does the head and breech squeeze through an *ostium vaginæ* so rigidly contracted that no one could presuppose a delivery possible, unless attended with extensive rupture.

In the second place, granting the perineum does not escape injury, my own experience agrees with Killan's,* that such a

* Die Operat. Geburtshülfe, vol. i,, p. 168.

laceration will heal as readily as an artificial incision, provided a few metallic sutures be at once introduced, and the catheter be used for a few days. The wire suture is decidedly preferable to the serres-fines, which are so much used in France for this purpose, but which approximate merely the cutaneous edges of the wound, leaving the deeper portions gaping. Very little pain is experienced in the introduction of these sutures, provided they are resorted to immediately after the delivery of the placenta; for at this early period after labor the perineum is comparatively insensible.

Before concluding I wish to add my protest to those of Mauriceau,* La Bas,† Denman,‡ Roederer,§ Gardien,‖ and Gehler,¶ against the indiscriminate use of lard and of other unctuous substances so universally found in the lying-in chamber. For this error we are indebted to the ancients, who borrowed the idea from the trainers of their athletes. "*Uncta palæstra*," "*nitida palæstra*," writes Ovid in allusion to the custom of anointing the bodies of those who were preparing for any contest of strength or of speed. Whilst Lucian, in his dialogue on athletic games between Solon and Anacharsis, makes the former say: "Since oil renders leather more supple, more tough, and less liable to crack, it would be absurd to suppose that it did not have the same effect upon living flesh." In labors dry from the outset, or that have become so through delay, or through frequent touching, there is advantage in the use of lard, or preferably of glycerine, which induces a serous discharge from the vaginal walls. In my experience, however, the inhalation of ether, and *especially* of chloroform, will act better by restoring the natural glairy secretions. The examining finger, it is true, should always be annointed, so that it may not rob the

* Traité des Maladies des Femmes Grosses, lib. ii., cap. x.

† L'Art d'Accoucheur, 1780, p. 58.

‡ Practice of Midwifery, vol. i., chap. ix., sec. 8.

§ Elementa Artis Obstet. p. 146, sec. 311.

‖ Traité des Accouchemens, vol. ii., p. 262.

¶ Schlegel's Sylloge, vol. ii., p. 778.

vagina of its own proper lubricants. But why besmear the maternal passages with oil or lard, and thus dilute and decompose those bland and alkaline secretions which a provident nature has usually so plentifully supplied for aiding the strictly physiological processes of labor? The continental method of keeping the woman on her back has the advantage of allowing these glairy fluids to trickle over and lubricate the perineum. My own practice is to discard the use of lard, and to content myself with keeping the cutaneous surface of the perineum well smeared with the surplus mucus which escapes from the vulva.

The researches of Moore,* Murphy, and others, have established the fact that the perineum and vagina, as well as the os uteri, possesses, like other sphincter muscles, an inherent power of expansion, apart from the direct pressure of the presenting part of the child; for they often begin to dilate long before it impinges upon them. Is not this expansion in a measure due to the direct influence of the mucous secretions, and also of the liquor amnii? Does it not frequently happen in the outset of labor that a physician experiences difficulty in introducing his well-greased finger into the vagina, a difficulty which no amount of lard will overcome; but so soon as the secretions are established, or sometimes as soon as the liquor amnii begins to dribble away and moisten those parts, he can readily introduce his whole hand? Cannot the relaxation of a rigid os uteri be sometimes referred more intelligently to an active dilating property in the dribbling waters than to the *vis a tergo* of increased uterine contractions? Whether this be the correct interpretation of their action it is not easy to say; but since nature, from her own laboratory, furnishes the physician with drugs capable of dilating circular muscular fibres, it is not improbable that, to facilitate her own operations, she may provide secretions possessing a dilating as well as a lubricating power?

PRESTON RETREAT, PHILADELPHIA.

* Edinburgh Medical Journal, June 1866, p. 1125.

ART. IV.—SUMMARY OF A PAPER ON THE HYDRATE OF CHLORAL. By M. BOUCHUT, M. D.

1. Chloral hydrate, or the hydrate of chloral, is a powerful sedative to both the motor and sensitive nervous systems.

2. If it is not entirely pure and crystallized, so that it will give off the vapor of chloroform without coloring its aqueous solution by the addition of potassa, it is without (its characteristic) action, and may be very dangerous.

3. The dose should not exceed eighty or ninety grains for an adult, and for children we should begin with no more than from fifteen to thirty grains a day.

4. It should not be prepared for use long in advance, because it may undergo such chemical or physical modification as to destroy or impair its efficiency.

5. It may be administered by the mouth or rectum. It produces the same effects by the latter as the former method; but, if convenient, it is always better to administer it by way of the stomach.

6. It should not be given to persons affected with organic disease of the brain or heart.

7. It is by the evolution of chloroform in the blood, under the influence of the alkaline reaction of the blood, that hydrate of chloral, taken into the stomach (and thence absorbed into the circulation), produces sleep and anæsthesia.

8. It is dangerous, in man, to administer it by subcutaneous injection.

9. Arterial tension increases under its influence, and the pulse is slightly accelerated. The tension diminishes after waking, as proved by the sphygmographic tracings.

10. The urine secreted during the chloral sleep is neutral. Boiled with Fehling's solution, it does not at first reduce the salts of copper, but next day, when chloral appears in the urine, the latter has a higher specific gravity, and effects the reduction of the salts of copper to such a degree as to induce the belief that diabetes is present, which is not the fact.

11. It rarely induces vomiting, and never purging.

12. The temperature is somewhat lowered by a non-poisonous dose, thus placing it in the class of cooling medicines.

13. It diminishes perspiration, and the skin becomes a little drier than in the normal state.

14. It has this advantage, that it can be administered in a definite dose, just enough to produce anæsthesia, for example, and no more; while in the inhalation of chloroform, the amount of its vapor which is inhaled is never definitely known. When we give chloroform, we are never sure what we are doing, *and it is from this cause chiefly that chloroform is dangerous.*

15. Its action *is exactly that of chloroform*, but is longer in producing its effect, and its action continues much longer.

16. In some cases chloral causes a muscular and emotional agitation, resembling alcoholic intoxication, but the intoxication is neither disgusting nor disagreeable.

17. In almost all cases, the sleep induced by chloral is remarkable for the complete anæsthesia with which it is attended, and it is rarely accompanied with hyperæsthesia.

18. The anesthesia is proportioned to the dose given; and under a dose of from thirty to seventy-five grains, according to the age of the patient, cauterization with Vienna paste, or even the extraction of teeth, may be performed without sensation.

19. Compared with opium, which often causes vomiting, which destoys the appetite, which stimulates and heats, which constipates, which excites perspiration, which induces sleep but slowly, and then heavy sleep, which is followed by prolonged drowsiness, chloral does not excite vomiting, nor cause constipation; it increases appetite; it dries the skin and cools it a little; it induces quick and prolonged sleep; on waking there is no heaviness or drowsiness, and it may be taken many days in succession.

20. In large doses, chloral lowers the temperature of the body, producing the sensation of coolness, while opium, on the contrary, raises the temperature, and produces a sensation of warmth, which induces perspiration.

21. A dose of from forty-five to seventy-five grains of hydrate

of chloral may be repeated two or three times a day without harm, and the result will be two or three hours of sleep from each dose, followed by a short period of waking.

22. As a remedy, it is sedative in the violent pain of gout, in the agonizing pain of nephritic colic, or of toothache, and also in the pain of burns or scalds. In short, it is the best of the anæsthetics administered by the stomach.

23. In cases where chloroform is desirable, as in labor, to lessen the pain of natural accouchement, in obstetrical operations, or in child-bed convulsions, the hydrate of chloral is equally available.

24. Finally, in severe chorea, when we wish to arrest the convulsions speedily, in consequence of the danger to the patient from the violence of the convulsion alone, hydrate of chloral is the most efficient remedy known.—*Pacific Med. Jour.*

## ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

*Michel's Process for Removing External Tumors.*—The preparation used in all cases where the tumor can be reached, externally is made in the following way. Asbestos, as soft and free from grit as possible, is reduced by rubbing between the hands to the finest possible fleecy powder. It is then mixed thoroughly with three times its own weight of strong sulphuric acid ($SO_3HO$), and worked into the desired shape with a silver or gold spatula. Mr. Bell remarks that the practical working of this powerful but simple escharotic is very remarkable; it destroys rapidly and completely whatever tissues lie directly beneath it, and in doing so neither causes the extreme pain which might naturally be expected, nor the local inflammation and general feverish symptoms which render similar applications undesirable.

NOTE.—Prof. Holloway has been unable to prepare this Department. The editor has given the best practicable substitute.—ED.

In its application it is requisite that the patient should be so placed that the surface of the tumour is level. The adjoining parts of the skin are to be protected by a broad circle of collodion and a thick pad of soft linen. Nearly the whole surface of the tumor is to be then covered with a layer of asbestos and acid, the thickness of the latter being about half an inch for a tumor the size of a hen's egg; and, to insure that the contact is uniform, the surface of the asbestos is to be covered with sovereigns. The skin beneath the mass is rapidly destroyed, a very narrow white circle making the separation between the dead and living skin. The pulse remains quiet. The patient complains of considerable pain whilst the skin is being penetrated; it is not unbearable, however, and becomes much lessened after the first twenty minutes. Soon a slight oozing appears at some point from beneath the mass, the careful sopping up of which requires the undivided attention of the operator or experienced nurse for some hours. The length of time required for the destruction of a tumor varies with its size, its nearness to the surface, and the capability or the special tissue to resist the action of the mass; but in one of the size of a hen's egg the first application may be left on from 8 A. M. till 10 P. M., when it may be removed; made up afresh to half the size, and reapplied for the night, being finally removed on the following morning. The wound should appear quite dry, and the darker and more depressed it is the better.

The healing process then alone requires to be attended to, and this is divided by Mr. Bell into (1) the stage of quiescence, (2) the suppurative stage, and (3) the healing stage, for the treatment of each, of which minute directions are given. Mr. Bell is quite aware that this plan of treatment will not prevent the return of malignant disease, but he claims for it the the following advantages:—1. That the shock of a surgical operation is entirely avoided. 2. That besides the tumor very little of the surrounding parts are injured or removed. And 3. That a malignant tumor when removed by means of the escharotic is not so rapidly recurrent as when it is excised.

Through ill health, Mr. Bell has been unable to follow up this mode of operation, and has left its prosecution in the hands of Mr. Henry Robinson.—*Ex.*

*Post Mortem Elevation of Temperature.*—Few physicians are aware that so far back as the year 1770 the celebrated physician, De Haën, of Vienna, observed that an elevation in the temperature of the body occurred in the death-agony, and persisted for some time after death had actually taken place. The observation, however, was soon forgotten, and it is only recently, since attention has been especially directed to the changes occurring in the temperature of the body in disease, that the fact has been reëstablished. The point has been made the subject of a prize by the University of Berne, and the prize has been carried off by M. Valentin, a relative, we believe, of the well-known physiologist. The following are the principal results at which he has arrived. The development of heat after death is common to all bodies, though varying in degree in different instances. As soon as the development of heat in the body after death is greater than the cœtaneous loss of heat by physical causes, an increase in the temperature occurs. This occurs, consequently, either from an increase in the development of heat, or from the concurrence of circumstances diminishing the loss of heat. The *post mortem* elevation of temperature primarily results from the persistence of the vital processes which ordinarily lead to the development of animal heat, even after the heart has ceased to beat. Augmentation of these processes, which especially result from certain nervous influences, may cause great *post mortem* elevation. The occurrence of rigor mortis, although causing the elimination of some heat, is yet only of subordinate influence on the general elevation of temperature that occurs after death. It is not improbable that *post mortem* disintegration and decomposition may to some extent aid in the *post mortem* elevation of temperature. The loss of heat after death is, *cæteris paribus*, much smaller than during life, owing to the cessation of respiration, and the diminished evaporation from the skin, and this may also be accessory to an elevation of temperature without the

actual generation of heat. The experiments which enabled M. Valentin to draw the foregoing conclusions were made on the dog, rabbit, pig, guinea-pig, marmot, pigeon, and frog.—*Lancet.*

*Yellow Fever in Buenos Ayres.*—At the beginning of this year Buenos Ayres had a population of more than 180,000. Towards the close of January (which is a summer month in that part of the world) yellow fever began to show itself in that city, and by the end of the first week in February the deaths due to it numbered 50. The fever increased in severity, and 1,757 persons died of it during the last week of March. The latest official returns show the deaths during the week ending April 12th to have reached 2,926. The total mortality due to yellow fever in Buenos Ayres during the period from the 1st of February to the 12th of April is given officially as 9,758, and probably exceeds that number.

These statistics, however, do not give an adequate idea of the extent of the calamity. As the fever increased in severity the inhabitants began to fly from the city into the country, and from 180,000 the population of Buenos Ayres had sunk to 30,000 by the beginning of April. There was, therefore, a mortality of about 3,000 in one week among a population of 30,000—decimation in one week.

Buenos Ayres lies very low, part of it being only a few feet above the level of the sea. Cesspools abound in it. There are more than 60,000 cesspools, many of which have been in use for more than a century; some, it is said, for two centuries. Since the outbreak of the plague attempts have been made to clear out some of these cesspools—a proceeding which we cannot help regarding as very hazardous. The streets have been covered with gas-tar; carbolic acid has been thrown about in all directions; and turpentine allowed to diffuse into the air, in the hope that the ozone generated by the slow oxidation of the turpentine might aid in arresting the contagion—*Ex;*

*Fission of Red Blood-Corpuscles.*—Dr. Laschkewitsch, of Charkow, places on record, in the last part (Heft iii.) of Strick-

er's "Medizinische Jahrbücher," a case of Addison's disease in which he obtained the remarkable phenomenon of fission of red blood-corpuscles. The patient was forty-five years of age, very anæmic, and suffered from considerable debility, with headache, palpitation of the heart, and dyspnœa. The size of the spleen, as ascertained by percussion, was somewhat increased, and there was a little sibilant rhonchus in different parts of the chest, but few other indications of disease. The patient had been perfectly well up to a year previously, when he suddenly fell ill with vomiting and diarrhœa. He became very feeble, and several similar attacks occurred in the course of the year, his memory at the same time failing. On examining the blood-corpuscles under the microscope, they appeared paler and larger (flatter) than usual; and he observed that they changed their form whilst under examination. They presented, buiscuit, club, and vermiform shapes; thrust out one or more processes and again withdrew them; constrictions occurred, and ultimately portions separated off entirely. The addition of a little weak acetic acid considerably accelerated the rapidity with which these changes took place. Finding these relations interesting, he experimented on the corpuscles with heat and electricity; but neither these nor the addition of quinia produced any alteration in the phenomena witnessed. He was able to obtain Teichmann's crystals from the blood, but they were few in number, small, and pale. In the course of three months the bronzing of the skin of the face, neck, and hands became well marked.

Fission of the red corpuscles has been noted by Friedrich as occurring in the case of leucæmia.—Ed.

*Professor Crocq of Brussels on Cholera Contagion.*—The question of cholera is at present one of so much importance that all documents on the subject coming from recognized authorities, and bearing a practical character, must be noted with great care. Professor Crocq, of Belgium, vice-president of the Brussels Academy of Medicine, has just communicated to the Paris Academy of Medicine the results of a series of experiments which he has carried on upon animals with the object of

testing whether the alvine evacuations constitute the true vehicle of the choleraic virus. In all of the animals he has succeeded in producing most of the symptoms of cholera, and he finds that the alvine evacuations indeed constitute the vehicle of the virus, not, however, as was suggested by Pettenkofer, through a kind of fermentation, but because of the immediate presence of the virus in the evacuations. M. Crocq draws the following inferences from the results of his researches:

1. Cholera is contagious, and is transmitted by a virus, the vehicle of which is the alvine evacuations.

2. The virus may manifest its effects even less than twelve hours before any evacuation of matter.

3. The period of incubation may be only of two hours; it may continue over one or two days, and even more.

4. All the subjects do not show a like predisposition to undergo the effects of the choleraic poison, receptivity may even be altogether absent.—*Ec.*

*A Test for Hysteria.*—The "Medical Press and Circular" directs attention to a French work recently issued by Dr. Chairon, entitled "Clinical Studies of Hysteria." Dr. Chairon is chief medical officer to the Vesinet Asylum, and bases his opinions on an experience with 26,000 female patients, among whom were a great many cases of hysteria:

He says that he has ascertained that in every one of them the commencement of the affection has been marked by a special sign—insensibility of the epiglottis. The determination of this symptom, which is constantly present, is very simple. It is sufficient to introduce gently the finger into the mouth, so as not to frighten the patient, and place it on the base of the tongue. It will be found that the epiglottis may be touched, displaced, and scratched with the nail without producing the least regurgitation. When this condition exists, there will be found invariably a congestion of one or both ovaries, usually of the left.

*Specific for Ptyalism.*—Sir Thomas Watson remarks that M.

Jukes de Styrap has found a combination of chlorate of potash and sulphur, ten grains of each, taken every four hours, almost a specific for mercurial ptyalism.—*New Ed. Prac.*

## CLINICAL RECORDS.

**"Ex principiis, nascitur probabilitas: ex factis, vero veritas."**

CLINICAL LECTURES AT THE "HOPITAL DE LA CHARITÉ," given by S. JACCOUD, Assistant Professor to the Faculty of Medicine at Paris; Physician to the Hospital St. Louis; Chevalier of the Legion of Honor; Corresponding Member of the Royal Academy of Science of Lisbon, and of the Medical Societies of Berlin, Vienna, Wurzburg, etc. Containing twenty-nine wood cuts and eleven chromo-lithographs. [Translated by Dr. J. D. JACKSON, of Danville, Ky.]

### SIXTEENTH LECTURE—DIFFUSE SCLEROSIS OF THE SPINAL MARROW.

**Clinical Exhibition of a Case of Paralysis Disseminated throughout the Four Limbs—Character of the Paroxysmal Pains—State of Electric Contractility—Disorders Connected with Micturition and Defæcation—Derangement of Sensibility.**

**Diagnosis between a Lesion of the Spinal Nerves and Lesion of the Marrow—Diagnosis of the Seat of the Lesions of the Marrow—Diagnosis of the Nature of the Lesion—Concerning Sclerosis of the Marrow—Its two varieties—Uniform Sclerosis—Diffuse Sclerosis—Observations—Treatment of the Painful Attacks in Spinal Sclerosis.**

Gentlemen,—I cannot complete by an autopsy the history of the patient which I propose studying to-day; she will necessarily succumb to her disease, but this fatal termination is many months off, and perhaps a year yet. Nevertheless, I do not wish to let this interesting case pass, instructive as it is in more than one respect. It will furnish me with the occasion for sketching the prominent traits in the history of an obscure disease of the spinal marrow, and although informal, this rough sketch will not be without utility, viewed in comparison with the delineation of progressive nervous atrophy, which occupied us in our two last meetings.

In No. 6, St. Anne's Ward, there lies a woman fifty-six years old, and of robust constitution, who had never had any serious disease before that which forced her to enter the hospital some months ago. This affection is traceable to an already ancient date, and the patient, who with an intelligence above mediocrity, possesses an excellent memory, thus traces the initial phases. It was one day* two years and nine months ago, that following a very painful nervous impression, she was suddenly seized with a general trembling, to which was added on the second day a complete impossibility to walk or stand erect. The beginning is, you see, very clear, and this detail has its interest. About eight days thereafter the trembling disappeared, and has never recurred; but the powerlessness of the inferior members persisted for more than three weeks, after which it gradually receded, and six months after this species of attack, the patient returned to her every-day life. However, she did not return to as perfect a state of health as before; she soon observed, to her mortification, that she was much more quickly fatigued than formerly, and that the cessation of movement could not be deferred a minute. This was the first period. It continued without any modification for eighteen months, when one of fortune's reverses plunged her into the most complete destitution; to supply her wants, this unfortunate one commenced selling bonnets beneath a carriage-way, where she was exposed to dampness and a continual current. After three months of this rough life, she was taken with sharp pains in the loins and back, and at the end of some weeks, these pains radiated to the lower limbs. The patient struggled still for a certain time; then the pains attacked the superior members, the movements of the hands became difficult and embarrassing, walking and standing erect caused lively suffering, and soon were no longer possible, and in six months after the symptoms had declared themselves, the woman, powerless in her limbs, entered the hospital, where I have observed her for nine months.

This retrospective history may be thus resumed: After a

* This Lecture was given in the last week of July.

moral emotion, the sudden appearance of a general trembling and impaired motorial power in the lower limbs; at the end of six weeks an apparent cure, with persistent enfeeblement of the muscular force. Twenty-one months later, under the prolonged influence of cold and moisture, there are dorsal pains, which soon extend themselves to the limbs, and at the end of the second year, impairment of motion in the legs and arms.

Since this woman has entered the hospital the accidents of akinesia have presented an aggravation which, though mild, has been continual; on the other hand, the painful phenomena have amended, and I wish, in finishing now with this symptom, to indicate their peculiar characters; they are of considerable importance.

The patient says, that during three months prior to her entrance into hospital her pains were continuous; this is possible, and I can say nothing as to this period, since I did not observe her; but this I can affirm, it is that during eight months these pains have always presented a double element, the one continuous, the other paroxysmal. I will explain: In the cervico-dorsal region there are two points which are constantly painful, either spontaneously, or more especially when pressed upon; one of these points is at a level with the seventh cervical vertebra, the other, more extensive, occupies the height of the last dorsal, and all the lumbar vertebræ. These fixed pains, which pressure augments either over the spinous apophyses or the lateral parts of the column, are very moderate; when they alone exist, they do not deprive the patient of sleep, there is, to speak truly, a continuous uneasiness rather than a lively pain. But all at once, without any appreciable cause, these symptoms were aggravated, an intense pain declared itself at the points indicated, which became the foci of irradiation, starting from which, they shot out through all the four limbs. These paroxysmal symptoms are horribly violent; as long as they remain, the patient has not a minute's sleep, and she avoids everything like motion, in order not to increase her sufferings, which, despite all her courage, often move her to tears. These painful attacks con-

tinued at least forty-eight, and are often prolonged to seventy-two hours, the longest which I have seen, persisted for four entire days. These phenomena, which burst forth suddenly, do not disappear in the same manner; they gradually fade away, and this period of decline embraces from twelve to fifteen hours; after which a calm having taken place, there are only the two painful points at the cervico-lumbar region. At the commencement of my observation, that is to say, for nine months, the paroxysms returned, on an average, every week; this state of things continued for three months, then the attacks were wide apart, and lost a little of their intensity; dating from the fifth month, they were not oftener than every fifteen or twenty days; finally, for five weeks the paroxysmal pains have been entirely absent, but the fixed pains are always the same. Howsoever violent they may have been, the attacks have never been accompanied by fever.

You see by what has been said, gentlemen, that if the march of the disease has been continuous, it has, nevertheless, not been uniform; the habitual tranquility of its gait has been many times broken by painful attacks, irradiating from the back to the members. Note also, that after the most violent paroxysms the motorial disorders have always been more marked than they were before the attack.

I will not, in the exposition of these symptoms, follow the chronological order of their developments, such a course would be both fastidious and sterile; for the diagnostic study that I propose, it suffices that you should be clearly taught the actual state of the phenomena, and you should not lose view of this important fact; from the appearance of the first dorsal pains it took twelve months for the disease to produce the disorders which we observe to-day.

The phenomena of paralysis occupy the four limbs, but more markedly so on the right than the left; observe in what they consist.

The right lower limb is completely immobile, the movements in their totality, as well as partial movements, are all abolished.

On the left, the crural adductors, the extensors of the leg upon the thigh, and those of the foot upon the leg, are inert, but the posterior muscles of the thigh and the flexors of the foot upon the leg preserve a slight motility, which permit the patient to execute certain movements with the extremity of the foot, and to flex the limb at the articulation of the knee; the heel is then drawn up on the plane of the bed, which it never quits. These movements are themselves very limited, any other is not possible.

In the upper members the disorders are localized in the same manner, in the two sides, but they are more pronounced on the right; the movements of the forearms and hands are abolished; in the flexors, among others, the inertia is absolute, this is the muscular group which was first stricken; certain muscles of the arm, and the pectoral muscles have preserved to them a certain amount of action permitting adduction, and flexion of the limbs at the articulation of the elbow; when the patient executes these movements, the forearm and the hand are drawn passively by contraction of the biceps and the anterior brachial and pectorals, but they are not effectual in the accomplishment of the act. On the left side the triceps and the deltoid, the posterior muscles of the scapula have still some activity; on the right they are entirely inert, as are the spinal muscles. To resume, the upper limb of the right side has all its muscles paralysed, excepting those animated by the musculo-cutaneous nerve; the upper limb of the left side has the same muscles preserved, and in addition, one of the brachial muscles receiving its power from the radial, and the muscles animated by the circumflex, and the collateral branches of the brachial plexus are only incompletely affected.

These akinesias are not developed *en bloc* and all of a piece; the flexors of the hands have been first attainted, then the extensors of the legs and feet; the paralysis of the lower limbs remained for more than four months incomplete, as well on the right as the left; then the disorders have progressed in such a manner as to produce on the one part an almost perfect paraplegia, (the flexors of the left having alone preserved a perceptible

motility), on the other part a paralysis of the upper limbs, which is total in the forearms and hands, and which in the arms and shoulders has respected in a slight measure the muscles which I have indicated to you. It is nine months since the paralysis made its début; it has been three since it arrived at the actual generalization. As to the muscles of the trunk, from the neck to the head, they are intact on the two sides.

The troubles of sensibility contrast by their lightness and their slight extent with the grave disorders of voluntary movement; at the commencement of the month of May last, that is to say six months after the origination of the paralysis, the only disorder was an analgesia, rigorously limited to the back of the hand and forearm, and a perversion of sensibility and temperature at the same points. To-day, three months later, the analgesia and *thermic anæsthesia* always limited to the left limb, mount up to the superior insertion of the deltoid; in addition to this the tactile sensibility is abolished on the dorsal face of the medius and annulare of the same side, and on the right hand it has disappeared on the back of the three middle fingers. Thus, since three months, the disorders of sensibility, pain, and temperature have gained in extent, and there have been added very limited troubles of tactile sensibility. In the lower limbs the sensibility is still intact in all its modes.

During the same time, three months I repeat, a phenomenon worthy of consideration has appeared, this is an incontinence of urine and fæces with an abolition of vesical and rectal sensibility; not only does the patient void her excreta upon her person, but she perceives no necessity for urination or defæcation, and she has no perception of the ejection of the urine or fæces from their reservoirs. Finally, the reflex movements are preserved, though a little weak and difficult to provoke, and there has never been in the limbs contractions, or cramps, or fibrillary contractions.

This exposè of the symptoms clearly shows that we have not here to do with one of the classic forms of paralysis, and the diagnosis ought to be the object of severe discussion. That the cause of the accidents resides in the spinal marrow there can be

no doubt, but in presence of the patient whom we studied in our previous lectures, it is proper for us to demand whether it is the marrow itself, or the peripheric nervous system which is the cause. Now, if you have attended ever so little to the symptoms which characterize progressive nervous atrophy, you will conclude with me that there can be no question as to the actual state of the case, and that we have in this instance a lesion of the marrow. In effect the paralysed muscles, the ones which have been so from the onset of the disease, are scarcely at all atrophied, they have preserved their electric contractility; it is very good, and particularly so in the muscles of the forearm, which have been nevertheless inert for the past nine months, only the crual triceps and the deltoid have in part lost theirs, and have in the meanwhile become a little atrophied, but it is here that there is an isolated fact of which we will soon see the true signification, the preservation of the reflex movements is still a phenomenon contrary to the hypothesis of a lesion of the peripheral nerves; it is also true for the dorso-lumbar pains, and the paroxysmal pains; finally, it is true for the incontinence of urine and fæcal matters, and the regular paraplegic form, which the paralysis of the lower extremities presents. For all these reasons, which plead in the same direction, I eliminate the possibility of a disease like that of our man of St. Charles' Ward, and conclude that the affection of this woman is one of the spinal marrow. Permit me, before I go farther, to point out to you a cause of error in the interpretation of analogous facts. Suppose that in our patient we should find the muscles atrophied, and deprived of their electrical contractility, would this be sufficient to establish it as a fact, that the alteration proceeded from an alteration of the peripheric nervous system? Yes and no, all depends upon the date of the appearance of these symptoms. That which characterizes the atrophy and defective contractility, is dependent upon the rachidian nerves, that which in fact is the pathognomonic symptom of lesion of these nerves is the precocity, the rapidity of their development. The simple notion of their existence is without value for judgment; when a lesion

has altered and disorganized the deep parts of the marrow, you will have atrophy, and you will have the loss of contractility of the correspondent muscles, but not as a general rule have it before about five or six weeks. If, on the contrary, it results from a lesion of the nerves, these symptoms have already become appreciable at the end of the second week, as we have hitherto established. This is one of the reasons why the diagnosis, always difficult in obscure cases, becomes almost impossible when one has not followed the case from the beginning. Here, happily, the cause of error does not exist, and we are able without any fear to rest upon these two capital facts; there has not been any rapidly developed muscular atrophy, and the paralysed muscles have, for nine months, retained their contractility. The electrical exploration presents in this patient an interesting peculiarity which I think you ought to know. I have told you that the crural triceps does not react well to electricity; now when one applies the rheophores to this muscle there are contractions to be seen in the flexor muscles of the leg and foot, it is the case also on electrization of the right deltoid, the sudden contraction of the anterior muscles of the arm causes flexion of the forearm upon the arm. There are here then, gentlemen, reflex phenomena, and the results of these proofs are the best demonstration of this other fact so important in the diagnosis we are making out—the preservation of the reflex motility.

It being admitted that our woman is affected with a lesion of the spinal marrow, all is not yet said, and we ought now to seek the seat and nature of this lesion. And first, can any one lesion only account for the combination of phenomena observed in our patient? To this question I boldly respond in the negative. Suppose for an instant that there is but a single alteration, it is evident, viewing the paralysis of the arms, that this lesion is seated on a level with the cervico-dorsal swelling. But as all the mucles of the arms and shoulders are not affected, it is clear that all the cells and all the nervous fibres which unite in the formation of the brachial plexus are not concerned, and nevertheless this lesion, which, relatively to the cervico-dorsal

protuberance of the marrow, is necessarily partial, paralysing almost all the muscles of the lower limbs, respects the intermediary segment since the muscles of the trunk are intact. The hypothesis of a single lesion has thus against it a series of impossibilities, which permit of no hesitation; the symptomatic phenomena disseminated throughout the four limbs, without a participation of the trunk, evidently responds to lesions disseminated in the marrow, it is impossible that it should be otherwise, this is a necessity.

A close observation and vigorous interpretation of the symptoms permit one determining with satisfactory precision the seat of these multiple lesions; they occupy the inferior portion of the cervical protuberance and the crural protuberance; this last is more completely affected, since in the inferior members everything is paralysed, save the flexor muscles of the leg and of the left foot, and that there is an incontinence of urine and fæcal matters. The segment of marrow intermediate to the two protuberances, and that which is above the first roots of the brachial plexus are sound, since the muscular groups innervated by these segments present no species of disorder. In the two spinal regions which it occupies the lesion, whatever it may be besides, does not extend to all the *kinesodique* or motor elements; since in the superior limbs, as in the inferior, certain muscles have up to now escaped paralysis. If, pushing further the diagnosis, we wish to determine what are the elements of the marrow which are participating in the alteration, I think that the clearness of the case permits us to advance up to this without much temerity.

The paralysis of motion of the arms and legs being the dominant symptom, it is clear, that in the brachial and crural protuberance, the lesion is seated in the anterior spinal system; this is the name which I have given in my work upon the paraplegias to the union of the moter elements of the marrow. When we consider the absence of atrophy, and the preservation of electrical contractility in the paralyzed muscles, it is probable that the lesion especially involves the white parts of this

system, that is to say, the antero-lateral fascia; nevertheless, the grey substance or the anterior roots, in starting out, are affected, but in limited points. It is to this lesion that I attribute the atrophy and loss of contractility of the deltoid and crural triceps. The analgesia and thermal anæsthesia in the left upper limb, the tactile anæsthesia of the fingers, the dorsal pains, with irradiation in the members, and the pain of a constricting girdling-like character, denote either a lesion of some of the posterior roots or of the grey elements which these roots proceed from. As anæsthesia of the fingers of the right hand exists without analgesia, the second eventuality is the most probable; since when the roots are seized, the sensibility in the correspondent points is altered in all respects. To resume, the lesion of the marrow occupies the brachial and the crural protuberances; affecting principally the anterior spinal system in the white portions, it evidently also affects some of the elements (cells or roots) of the posterior or sensitive nervous system. As for the system which I call intermediate, and which is the organ of reflex excitations, its integrity is proven by the persistence of movements of this order. Consequently, in the same points where the lesion affects the grey substance, it does not penetrate very profoundly into the marrow; if it were otherwise, the intermediary spinal system, or antero-posterior would itself be compromised.

In these conclusions relative to the seat of lesion, I have not spoken of the condition of the posterior white cords; concerning this I cannot tell you anything positive or even possible. Whether these cords are sound or altered, I am ignorant. The patient can neither walk nor stand erect, it is then impossible for me to know whether the influence of these cords upon coördination yet exists or not; as to the preservation of tactile sensibility, were it even more complete than it is here (where it is only lost upon the back of the fingers), it proves nothing either for or against the alteration of the posterior cords. In my study of the paralysis, I have already formulated this proposition, which I have justified by facts borrowed from divers au-

thors, and by the following one, which I myself observed in 1869, it is the most demonstrative: In a young man of thirty-two years of age, who had succumbed to a suppurative meningo-myelitis, I had demonstrated repeatedly, that the sensibility was perfect in all respects; the tactile sensibility especially was as complete and as rapid as in the physiological state, and placing myself upon this fact, I announced that the posterior white cords, where the grey substance commences, had preserved their normal constitution. As I saw that death was imminent, I once more repeated the proof, in order to put myself beyond all doubt, and I obtained results as apparent as previously. The patient died on the next day, and I found along with a suppurative meningitis a softening of the posterior cords in the cervical protuberance, and in the greatest part of the lumbar protuberance, with integrity of the posterior grey substance. The lesion was not composed of a simple change of consistence, with a preservation of the normal elements; the nerve-tubes were completely destroyed; those which were recognizable appeared deprived of marrow and cylinder, they only contained dissociated droplets of fat and amorphous granulations. Consequently, I say then, the preservation of tactile sensibility does not imply integrity of the posterior white bundles; it is clear that in cases of this kind the transmission of impression of contact made by the grey substance, and the compensative vicariousness which I pointed out among the white portions, and the grey parts of the sensitive system, is by that clearly demonstrated.* Even this year, my learned colleague, Vulpian, has reported a fact confirming this conclusion.†

Now, being informed of the condition which ought to exist with reference to the seat of the spinal lesion, we ought the more surely to seek out its nature. This is a lesion which occupies distinct regions of the marrow, but which does not involve entirely all the elements of sensation; on the other side it is an

* Jaccoud, Les paraplegies, etc., Paris, 1864, p. 534.

† Vulpian. Note on sclerosis in patches of the spinal marrow. (Soc. Med. des hopit., Union Médie., 1866.)

apyretic lesion of slow progress, and accompanied by painful paroxysms; now, I know of nothing except sclerosis, which rigorously responds to this union of conditions, and I am stopped by this diagnosis.

Sclerosis of the marrow, like that of the lung, and like that of the liver,* leads to atrophy of the normal elements of the organ; it presents itself under two forms, which I pointed out in 1864;† inasmuch as it affects at considerable length similar bands of the marrow, the posterior cords, or the antero-lateral cords, it is then the sclerosis which I call regular or uniform, and which Bouchard proposes to denominate ribboned; inasmuch as it is disposed under the form of isolated patches, disseminated in variable numbers over the divers elements, and at different heights of the marrow; this is the diffuse sclerosis, which Vulpian calls sclerosis in patches.

Uniform sclerosis of the posterior cords is the anatomical lesion of this spinal malady, of which locomotor-ataxia is the dominant symptom, this is frequently the case, and has been long since known. The uniform sclerosis of the antero-lateral cords gives rise to a paraplegia of slow march, with disorders of micturition and defæcation; this variety is more rare, and I wish to repeat to you an observation of Demme, which shows you clearly the pathogenetic influence and anatomical characters. I have already cited this case in my work upon paraplegias in article *sclerosis of the marrow.*

A robust man, fifty-eight years of age, had experienced for a very long time, a feebleness of the lower limbs, which rendered walking and standing erect extremely difficult, finally the paraplegia became complete, in the meantime there came on retention of urine and fæcal matters. Things had been in this state for fifteen days, when the patient was seized with pneumonia. On autopsy, Demme found along with a notable injection of the meninges, a very advanced sclerous degeneration of the antero-lateral cords, and almost the entire grey substance; the

* See the Lectures on sclerosis of the lung and liver.

† Jaccoud, loc. cit.

posterior cords remained intact. One could follow, in the parts affected, all the successive phases of the lesion, since the imbibition of the nervous cords by a delicate connective substance of a quasi liquid character, and rich in nuclei up to their destruction by a perfect connective tissue, thick and nucleated. It was on a level with the lumbar protuberance that the alteration was most advanced; in this region the most external fibres of the posterior cords commenced to be affected, and already presented a varicose intumescence.*

This observation is one of particular importance in the history of sclerosis, because of the simultaneous lesion of the white and grey substance. The sclerosis generally coïncides with injection of the pia-mater, and thickening of the connective peripheral network of the marrow, the cortical septum of Goll; it is then a meningo-spinal sclerosis; this double lesion was very clear in the anatomical pieces which I examined in Berlin with Professor Frerichs and Dr. Mankopff.

This much said about uniform sclerosis, I arrive at the diffuse sclerosis, which can alone be taken account of in the case of our patient, because of the dissemination of the symptoms. The variety, which has been figured by Professor Cruveilhier and Carswell, has been studied first by Türck,† then by Frerichs and Valentiner,‡ whose remarkable observation I have been familiar with for two years. Permit me to recall to you the principal traits of it; it presents us, along with our case, an analogy which is not without its influence upon my diagnosis.

A girl twenty years of age was taken with a feebleness in the limbs shortly after fording a brook; to this symptom was joined

* Demme, Beiträge zur pathologischen Anatomie des Tetanus. (Leipzig und Heidelberg, 1859.)

† Türck, Brobachtungen über das Leitungwermögen des menschlinchen Rückenmarks. Wien, 1855.

‡ Valentiner, Ueber die sklerose des Geherns und Rückenmarks. (Deutsche Klinik, 1856.)

Compare: Rokitansky, Ueber Bindegewebswucherung in Newensystem, Wien, 1857.

Frerichs, Ueber Hórnsclerose (Hæser's Archiv., x.)

very soon a tremulousness of the hands, then there came on a paresis of the muscles of the tongue, and the eyes; as for the rest there were no convulsions, and there was no loss of consciousness. During three years the patient presented numerous alternations of good and bad; at the end of three years there was complete paraplegia, a relaxation of the sphincters of the bladder and anus, a paresis of the extensor muscles of the trunk on the right side, and hence an incurvation of the left of the body; finally eschars, hectic fever, general œdema, and death. On autopsy there were found nuclei of sclerosis in the walls of the lateral ventricles, and pous varolii, and disseminated indurations in places in the spinal marrow.

In this case the progress had been slow and progressive, as in our patient, and the first setting in of the affection, as with her, was attributed to the impression of cold. It is true, that she was not affected with a pure spinal sclerosis, but a sclerosis of a cerebro-spinal character; this circumstance is an analogy the more in the history of our patient, and I ought now to point out to you a symptom which I have designedly put aside until now, in order not to obscure the discussion. Two months after the appearance of the first symptoms of paralysis, that is to say, at the seventh month, this woman commenced complaining of tinglings and pains in the left ear, with cephalalgia, always limited to the same side. These were the sole cephalic phenomena which she has presented, but they have been so marked and so persistent that she has repeatedly attracted our attention to them. Sometime after the pain in the head disappeared, but the tinglings in the ear always exist, and hearing is considerably affected on the left side; the woman pretends even to be completely deaf on this side; but I am assured by an attentive exploration that the assertion is without foundation. In the presence of this symptom, I am induced to believe that the sclerosis, in its irregular diffusion, has affected the structure of the left auditory nerve; and it is here that there is another resemblance to the case of Valentiner. For the rest, this extension of diffuse sclerosis to the upper parts is not extremely

rare, and in one of the cases of my learned colleague, Charcot, there was along with a lesion of the marrow, isolated nuclei of atrophy on the annular protuberance and the left pyramid.

Our observation differs from those of Charcot and Vulpian by the absence of paroxysms of cramping; but this difference is not so important that it ought to make us hesitate in the diagnosis. The prominent or paroxysmal contraction is not constant, it fails in spinal sclerosis; the symptom failed in the cases of Cruveilhier, and it was not a matter of question in those of Türck and Valentiner; consequently the absence or the presence of this phenomenon proves nothing for or against the lesion. I am not in a condition to affirm that the painful attacks without contracture, such as we have observed in our woman, exist in all cases; nevertheless, they scarcely fail in uniform sclerosis, and by analogy it is permitted us to suppose that they characterize also diffuse sclerosis; besides, these paroxysms constitute an initial symptom which the progress of the lesion can cause to disappear, and if one has not the opportunity of following the patients from the beginning, he is liable to pass by the presence of this phenomenon. This slow and continuous advance, with painful attacks following which the functional disorders are aggravated, is, to sum it up, the best characteristic of atrophic sclerosis, whatever organ it may have its seat in.

Medication is powerless in checking the progress of anterior spinal sclerosis; I know no case invalidating this proposition, however, the physician can not remain inactive in presence of the atrocious pains which sometimes torment the patients, there is here an urgent symptomatic indication to fill which at least the attempt ought to be made. In robust and plethoric individuals the repeated application of wet cups over the sides of the spinal column is useful, but even under these conditions the relief has always seemed to me but temporary; in a patient whom I attended for many months I never obtained any durable effect, and in our woman here this means has never given us any notable result. In individuals of moderate powers, and *a fortiori* in feeble subjects, I think we ought to entirely abstain from

bloodletting. I would have you also to spare the patients the useless torture of cauteries and setons, I have never seen that the pains were in the least degree in the world modified by them, it is a sterile aggravation of an already painful situation of the patient. In many cases of sclerosis of the posterior cords, *ataxic sclerosis*, I have uselessly tried the bromide of potassium, I gradually increased it to 4 grammes a day without obtaining any result; the same want of success followed in the case of the client of whom I am going to speak to you, and who, like our woman, is affected with that sclerosis which I call *paralytic* in contrast with the preceding; the same unsuccess, finally, has followed in the case of the patient whom we have before our eyes. Perhaps you will be more fortunate with other individuals, but only to judge by these whom I have seen I would not recommend this medicine in such cases. I have succeeded no better with the ergot of rye, although I have administered it perseveringly; to return, I have already seen in certain cases, in our woman's among others, a durable relief to succeed a mixed treatment by belladonna and nitrate of silver. Here is how I proceed: I cause to be made pills containing each a half-centigramme of extract of belladonna; the patient commences by taking one of these pills each evening before going to bed, and every third day he increases the dose by a pill until he produces a dilatation of the pupils, and a little dryness of the throat; this dose ought not to be exceeded, but unless there is an unusal susceptibility it can be maintained many days; if at this time there are no painful paroxysms, I commence the employment of nitrate of silver under the form of pills containing each a centigramme of the salt; one pill of a morning fasting is the initial dose, and we can arrive gradually at 4, 5, and even 6 centigrammes. But it is necessary to watch attentively the state of the stomach, and to examine daily the integument and conjunctivæ; often, indeed, the first doses of the medicine bring about gastralgia and dyspeptic troubles, which oblige the suspension for the time being, or a diminuition of the dose, and on the other side the salts of silver absorbed in certain quantity produce a brown discolora-

tion of the skin, a variable *melano-derma*, which sometimes first shows itself in the conjunctivæ. At the first indication of this phenomenon you ought to stop the medicine.

Such is the treatment which has in my hands succeeded best in calming and dissipating the pains of spinal sclerosis; it ought to be continued for weeks and months, but it is good to suspend it time and again for some days, in order to avoid the inconvenience of intolerance; it is with this treatment, as with all other active medicines, the question of its dose and continuance can not be defined in advance for all, but it varies for each case. You can without inconvenience give belladonna in the midst of a painful paroxysm, but the nitrate of silver under these circumstances seemed to me always to do more harm than good, and I only administer it in the intermissions. Twice in the past I have added to these internal remedies a belladonna plaster over the dorsal region, and the relief in these two cases has been most rapid; I caused the plaster to be prepared after the formula of Planche, namely:

℞.—Alcoholic Extract of Belladonna, 40 grammes;
Resina Elimi., 10 grammes;
Wax, 5 grammes.

Dissolve the wax and resin and incorporate the extract.

I cut two straight bands from this plaster, which I place on each side of the vertebral column, endeavoring to cover the spinous apophyses. If one does not have this plaster at his disposition when endeavoring to relieve the pain, he can simply rub up the belladonna in a little water so as to form a thick mixture, and spread a layer of it upon the lumbo-dorsal region. The application is thus more easily tolerated, but it has the inconvenience of soiling the linen of the patient, and of incommoding by the nauseous odor of the extract.

Finally, in certain cases the pains at the moment of the paroxysm are so acute, the sensation of thoracic or abdominal constriction is so painful, that the patient cries out loudly for immediate relief, which internal medication will not give him; it will then be necessary in instituting treatment to have recourse to

application of chloroform upon the painful dorsal point, over the regions which the pain occupies encircling the body, and over the limbs where the irradiations are experienced.

In an American affected with ataxic sclerosis whom I attended for some time, and who sometimes had most horribly violent attacks, this means succeeded better than any other in calming the sufferings and constrictive agony from the girdling pains of the patient. In this form of sclerosis, methodical electrization over the spinal column, or rather over the lateral regions on a level with the emergence of the nerves, generally calms the pains, and even improves the state of motility; but experience fails me in judging of this means in paralytic sclerosis; I have only employed it in one case, that is in our patient in St. Anne's Ward, and it gave me no result. Perhaps I would have been more fortunate if I had had at my disposition the constant current; it is in trophic lesions of the marrow and nerves that the galvanic current finds its most positive indication; the facts which I have observed at Vienna with my friend Benedikt, those which he reported in his remarkable works, and the observations of Remak, leave me no doubt of the superiority of this method of electrization in certain particular conditions.

Such, gentlemen, is the clinical history of our patient, the anatomical element of diagnosis is defective, but nevertheless I thought it would be useful to submit to a rigorous analysis a case which does not enter among the common forms of paralysis, and which has furnished me the opportunity of pointing out to you a disease of the spinal marrow, of which but little is known. I have also said the lesions of sclerosis escape very easily the naked eye, and doubtless the cases recorded as examples of paralysis without lesion belong to that class of alterations; on the other side, in an anatomico-pathological point of view, the knowledge of diffuse sclerosis of the spinal marrow is of high importance, for it disengages and defines clearly an anatomical species from the vague and confused group of chronic myelitis.

Five months after this lecture, at the end of December, 1866, the patient was nearly in the same state, save the exceptions

pointed out, the paralysed muscles always contract well under the influence of electricity; but two new phenomena have appeared. A slight, but permanent, œdema occupies the lower limbs up to just beneath the knees, and the intestines are the seat of a considerable meteorism, due doubtless to paresis of the proper muscular coats of the intestines and the large muscles of the abdomen. The incontinence of urine and fæcal matter is always the same; there are no eschars. In the upper limbs the paralysis has not made progress; the deafness of the left side persists.

## PROCEEDINGS OF SOCIETIES.

**"Etsi non prosunt singula, juncta juvant."**

HERNIOPUNCTURE. This Paper was read before the Louisville Medico-Chirurgical Society. By DOUGLAS MORTON, M. D.

In the September number of this Journal there was published a report of two cases of strangulated hernia, treated respectively by Dr. David Cummins and myself, by what I characterized as "a new and easy mode." In each of these cases the instrument used for evacuating the contents of the hernial tumor was a canula needle. A few days ago I had occasion to treat another case, in which I used a very small *trocar and canula*, and the object of my again appearing before the Profession on this subject is to call attention to the unfitness of this instrument for the purpose, giving rise, as I have found by experience, to a danger by no means inconsiderable.

In order that a trocar and its containing canula may pass easily through the tissues, the point of the former is made to cut an opening larger than will be completely filled by the canula at its smaller end. In the proper uses of the instrument this is no disadvantage; but we can readily see that when plunged into a hernial sac tightly distended by effused serum, the pass-

age of the instrument will be attended by an escape of some of this fluid into the subcutaneous cellular tissue, and when the intestine distended by flatus is punctured there will be a still more ready escape of gas.

These matters are readily caught in the loose cellular tissue of the scrotum, and may provoke a dangerous degree of erisypelatous inflammation. In the case in which I used the trocar this event occurred, and necessitated my making extensive incisions into the scrotum, which have not yet healed.

I am prompted by a sense of duty to lay these facts before the Profession, especially as I spoke of having had a trocar and canula made for treating hernia.

While the danger referred to furnishes no occasion of qualifying the terms in which I spoke of the expediency of the operation, it is certainly suggestive as to the kind of instrument that should be used, and the manner of its use. I am satisfied that the proper instrument is a canula needle. Those used with the hypodermic syringe, as I have before stated, will serve the purpose very well, but I think there would be an advantage in having a slight and uniform taper from heel to point of the needle—giving it an acutely conical instead of a cylindrical form. The advantage of such a form of needle is obvious, having forced its point through the herniated intestine, the escape of gas through the puncture may be effectually prevented by pressing the instrument a little further, so as to introduce a portion of greater diameter.

The tumor ought to be firmly grasped and steadied with one hand, and the instrument plunged suddenly and boldly in with the other, at least to the extent of half the diameter of the hernia in the direction the needle is thrust, which should be toward the stricture, backward and upward. This latter point is important, as it often happens that a very large quantity of bloody serum is effused into the space between the limits of the sac and the contained loop of intestine, making it necessary to plunge the needle deeply in order to reach the latter at all.

The instrument must be allowed to remain until the gas ceases

to flow out, when the operator should gently press the tumor, and at the same time slowly withdraw the instrument; when the point emerges into the space surrounding the loop, which always contains more or less serum, this fluid commences to pour out. By continuing the pressure properly the sac may be pretty well emptied of its fluid contents.

If a large loop of intestine is involved in the hernia, and is not held down by adhesions, it will probably return spontaneously the moment the instrument is withdrawn; but if the extruded portion is only a small section, and the strangulation has existed for some hours, the removal of the gas will accomplish only a small relative diminution in the size of the protrusion, owing to the thickening of the intestinal coats by congestion, and some manipulating may be required for its reduction. As puncturing the scrotum gives some pain, and the patient has a horror of having a sharp instrument stuck into this region, which is by no means unnatural, chloroform ought to be administered. When the doctor sets about this little operation, however, he will find that expediency demands its use as well as humanity.

It may happen that a hernial sac is so very tightly distended by effused serum that the tumor will feel solid, and give rise in the mind, of a novice especially, to doubts about its true nature; and as far as its mere *feel* is concerned, in such a case, the most experienced may not be able to determine the true character of the hernial protrusion—whether it be bowel or omentum. Now although I believe the novice will do no harm if he sticks his needle in a tumor he is doubtful about (provided in his differential diagnosticating he has excluded the possibility of its being a testis), it is certainly very desirable to know beforehand what prospect there is for accomplishing good with the instrument. I would therefore advise that, in addition to the ordinary means for diagnosis, he would draw the integument tensely across the tumor and percuss, after the manner that one *thumps* a watermelon. If the hernia contains gas, it will give out a sound, of course, more or less tympanitic; and presents a proper case for the use of the needle.

I go into these minutiæ because of being convinced that many failures occur in surgery, as well as in other matters, from insufficient observance of details, which may indeed appear at first sight inessential and nugatory.

I am reminded moreover by the motto on its back, that this Journal is designed for the "indocti" as well as the "periti," and I am writing for the former class, who must "discant," although the latter may be bored a little in the present instance in being called upon to "meminisse."

A few days ago, in conversation with a prominent physician of this city on the subject of this method of treating hernia, he told me that he thought the two cases reported some time ago afforded insufficient data to justify our conclusions as to the harmlessness of the operation. He appeared to entertain to a considerable degree the time-honored notion of the extreme danger attending peritoneal injuries. I would reply that, in forming an estimate of the danger of puncturing the serous investments of hernia, these two cases were not by any means our sole reliance. Our data consisted of the results very preponderantly favorable of a vast number and great variety of operations involving more or less extensively the peritoneum. In our discussion of the operation published in the September number of this Journal, I think the question as to the danger of peritonitis following directly the slight injury of the membrane, and that, as to the danger of extravasation, were satisfactorily disposed of, and I know of no other, except the one the notice of which is the main object of this paper.

The best light, however, in which to consider the utility of this operation, and the importance of minutely discussing its details, we get from the management of hernia cases as it is really very often conducted. I quote in the report referred to the views expressed by Mr. Birkett, as to the extent of injury that may be and is actually done in a large number of cases. Any medical man can appreciate the correctness of these views.

When a case of hernia falls into the hands of a man who makes no pretension to surgical skill (and the majority of cases

fall into such hands, there being a great majority of medical men who are without surgical skill) taxis, which seems so simple in description, and so very easy in practice, will be tried in by far the greatest number of cases. Now, taxis is by no means the easy thing it appears, and a great many failures actually occur when success would have crowned efforts guided by skill and experience.

These failures are very significant, for they may leave the patient in an immeasurably worse condition. Every effort which effects no progress toward reduction must necessarily increase the difficulties to be overcome, inasmuch as it gives rise to irritation, of which increased congestion of the hernia is the result.

Let us consider what is apt to occur in the country: A case of hernia falls into the hands of a man who has never tried taxis before; thinking it a very easy thing, he will set to work at it, and if there is any real difficulty to be overcome, will probably fail; in this event he will send for the nearest doctor in the neighborhood; and he may know no more about the matter than himself, but *he can share responsibility*, and this may be the sole reason why he is wanted. But Doctor No. 2 will certainly try his hand at taxis, and having greater difficulties to overcome, will in greater probability fail and injure the patient still more. At this juncture Doctors No. 1 and 2 will have a consultation, the conclusion of which will be that the case demands that the stricture be divided, and that a surgeon must be sent for. Now, the nearest surgeon may be a long way off, and risk will be run of his not being found at home. In the meantime the patient's chances of recovery are growing more and more slim. When the surgeon at length arrives, tries taxis himself awhile, as he will very likely do, and then opens the sac, the probabilities are that he will find the intestine very much in the condition described in the quotation from Birkett referred to.

Now, the great utility of the operation of evacuating the contents of the hernia arises from the fact that it requires no

special skill—the first doctor who sees the patient need not hesitate to do it; and if he sees him a short time after strangulation has occurred, he can do it in presence of conditions most favorable to success.

NOTE.—On making more extensive researches in the literature bearing on this subject, I have found that the "evacuation method" has been frequently and satisfactorily employed in the treatment of pneumatosis. I have learned also that lately it has sometimes been used in hernia, but as yet have seen no recorded case.

It is to be regretted, I think, by the Profession at large that so good an idea has been so little known; and I feel that this fact fully justifies me in presenting the above views.

## ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

### DIVISION OF LARYNX AND ÆSOPHAGUS WITHOUT WOUNDING THE JUGULARS OR CAROTIDS.

WARRENTON, N. C., 1871.

I send you the following interesting case: On the morning of the 17th of June, 1869, I was halted in the road by a young girl, who seemed terribly agitated, running to and fro and pulling her hair, as I rode up to her. She screamed out that her father had cut his throat, and please go in and do something for him. I immediately went to the house, a little way off, and found an old man lying upon a bed, weltering in his own blood, which seemed to have flowed pretty freely. Ghastly and cadaverous, his countenance presented strong marks of guilt, and added to this sad spectacle was a deep chasm, with jagged edges, caused by several ineffectual attempts at suicide. For nine years this old man had been a paralytic, and depended entirely for support upon the efforts of his wife and daughter. Previous to the time of the attack of paralysis he had been very useful to his family, and had quite a neighborhood reputation as school-master and surveyor. He was an Irishman by

birth, and naturally of quick and excitable temper. Thus prostrated by disease so long, and becoming more useless every day to his family, he at last reached that state of mind in which rashness knew no bounds, and, to put an end to his miserable existence, he made ten attempts with a razor to sever his larynx. The incision when I first saw it (ten minutes after it occurred) extended from the inner border of both sterno-cleido mastoid muscles, dividing the larynx above the thyroid cartilage, passing between that and the hyoid bone, severing it entirely through, and completely separating the hyoid bone from its attachments to the thyroid cartilage, the edge of the razor passing on, cutting the posterior wall of larynx, and dividing anterior wall of œsophagus without wounding or injuring in any way carotids or jugulars.

After the larynx had become so extensively wounded, nothing but a low mumbling took the place of imperfect articulation, already present from partial paralysis of vocal cords; it was with extreme difficulty that bystanders could make out what he wished to express. He was unable to swallow anything unless in the recumbent posture (assuming the dorsal decubitus) without the food or drink passing through externally, finding its exit at the wounded œsophagus and larynx. I placed the hyoid bone and thyroid cartilage as near in apposition as possible, moving the head about until I thought the "dislocation reduced." I then sutured the external wound throughout its entirety, and to a casual observer very little deformity or inconvenience could be discovered, except at times, when he would, with difficulty, attempt to speak, the air would gush out between the sutures. I then put on one of Gibson's bandages for fracture of the lower jaw, extending the roll to the chest, to be fastened to another bandage around the chest, instead of passing it under the chin, as is done in Gibson's operation for fracture. I then gave him an opiate, and left him.

The next morning, 8th of June, I visited him, and found him very comfortable, although in the night he had pulled the bandage forcibly from his head. I ordered his wife to replace it, and

to give him another opiate that night. From the considerable loss of blood, and being already in a state of malnutrition, I ordered tincture ferri. chlor. xv. gtts. three times a day in a little water, in order to make for him as much blood as I could, and give him all the chances for recovery. For five succeeding days he seemed to be doing well, when, on the morning of the sixth, I found that a good many of the sutures had been torn loose, as if by violence, and upon inquiry was informed that he had made another attempt at destroying himself, but was prevented from doing further damage by his wife. The wound had begun to heal very nicely, when this attempt was made to drag it apart, but the epiglottis had begun to swell, and it was with some difficulty that he could breathe or swallow. I cut apart the sutures, and removed them from each side, making an aperture in the half-closed wound to the extent of about two inches directly over the pomum adami. I fed him altogether on fluids, as he was unable to swallow solid food without a great deal of pain. He, at this juncture, expressed a wish to get well, and made no further attempt at violence upon himself.

On the 15th June I visited him, and found marked symptoms of inflammation, with considerable dyspnœa, and the wound healing very sluggishly, the attempt at union by first intention being defeated. I knew that the only mode left was to coax it to granulate from the extremities toward the centre, and to promote this, I ordered a wash of pb. acetatis grs. iv. to ℥., and cloth constantly wrung out of cold water to be applied to the parts; I employed no sutures in the membranous or cartilaginous portions of the larynx, and had removed all that had been applied externally with the exception of four or five, which drew together a space of about three inches. On my next visit I found him considerably improved, yet there was some difficulty in removing mucus from trachea and larynx; he continued to improve for three weeks, at the end of which time I considered him nearly well. The central opening had now nearly closed, the upper portion being somewhat contracted and falling within the inner margin of the lower flap, which was

considerably stretched, and projected on account of the weight of the trachea and the sharp point of the pomum. I made an incision in the tract of the old wound about two inches in length, pulled the upper flap as near as I could in apposition with the lower, and used a compress and bandage with gentle traction over trachea and around the neck, in order to relieve the tension resulting from a falling forward of the trachea, thus dragging the edges apart and opening the wound. Subsidence of the epiglottean inflammation soon took place, dyspnœa became less conspicuous, the newly severed part began to heal nicely in a few days, and in a better position, and at the expiration of four weeks the wound had completely closed. He could now talk to his friends with comparative ease, and all who knew him said that he spoke plainer than before the injury. Indeed, the old man looked better than I had ever seen him, and had gained considerably in flesh. He remarked to me that he thought the loss of blood had benefited his paralysis, and that he had more sensibility in the paralysed part than he had for years. He might have felt better soon after the accident from general relaxation due to loss of blood affecting the paralysed parts equally with the rest.

The case is remarkable on account of so extensive a wound of larynx and œsophagus occurring without injuring any important veins or arteries.

Persons who attempt destruction of their lives by laryngotomy lose sight of the fact that when they throw their heads back, as they all do, the vessels most important to their lives in this crisis, hide themselves behind the sterno-cleido-mastoid muscles, and in the attempt to wound them, they only strike muscle, and if they go further, larynx, trachea and œsophagus, as in this case.

I was led to report this case in support of one reported by Dr. I. R. Godwin, of Fincastle, Va., and to add another to Dr. Gross's list.

WILLIS ALSTON, M. D.

BALTIMORE, MD., 1871.

*Dr. E. S. Gaillard, Louisville, Ky.:*

Dear Sir,—I purchased at a book sale the following numbers of your Journal. Please let me know what they are worth to you, or any one else wishing to possess them. For 1866 I have the January, November, September, June, December, July, and August numbers. Those of 1867 complete except January; those of 1868 complete; for 1869, January, February, March, April, May, and June numbers; for 1870, December, March, April, May, and June numbers.

In some of the numbers I see where offers are made for back numbers.

Wishing to hear from you, I am yours respectfully,

A. T. GOLDSBORO, 105 West Lombard street.

NOTE.—Subscribers whose files are injured or lost can obtain from the writer of this letter any of the Journals specified. It is a rare opportunity; for the editions of the Journal are, almost all of them, exhausted.—ED.

## REVIEWS AND BIBLIOGRAPHICAL NOTICES.

**"Judex damnatur cum nocens absolvitur."**

STROUD'S PHYSICAL CAUSE OF THE DEATH OF CHRIST. D. Appleton & Co.: New York. 1871.

This old, yet remarkable and interesting volume is well worthy of the careful examination of every physician. The physical and physiological questions discussed, and the pathological as well as psychological problems elucidated, are of extreme interest and importance. Those whose interest in medicine is not confined to recipes connected with the pestle and mortar, or limited to the practical considerations of the ledger and cash-book, will find this volume of Stroud unusually attractive. The mere tradesman in medicine cannot be advised to purchase it. The following letter, addressed by James Begbie, M. D., F. R. S. E., Physician to the Queen, etc., to Dr. Hanna, author of another life of Christ, will be found interesting:

"I cannot help accepting as correct the explanation which Dr. Stroud has offered—and which you have adopted and so strikingly applied—of the physical cause of the death of Christ—namely, rupture of the heart, and consequent effusion of blood into the pericardium, the investing sheath of that organ.

"Such a lesion accounts for the phenomena recorded in Scriptures regarding Him—namely, the earlier than usual cessation of life during crucifixion, and the issuing of blood and water on the piercing of his side with the spear.

"It must be borne in mind, however, that rupture of the heart is comparatively a rare affection, and that the cases of it on record are, so far as I know, limited to those advanced in life, or to such as have been laboring under some degeneration of the structure of the organ, a condition which rendered it liable to be torn when subjected to the pressue of severe physical exertion, or the weight of mental agony. Now in regard to Christ, we know that at the period of his death he was in the prime of life; and that as morally he was 'holy harmless and undefiled,' so physically he was without spot or blemish. How intensely does this consideration magnify the sufferings he endured! We see him in the agony in the garden, and under the bloody sweat. We followed him to Calvary, and see him under the hiding of his Father's face, bearing our sins in his own body on the tree. We cannot estimate the anguish of his holy human soul during these awful hours, when there was drawn from him that most touching language: 'My soul is exceeding sorrowful even unto death'; but we can in some measure understand how his bodily frame, subjected to the full weight both of mental and bodily suffering, should yield and give way at the fountain of life, and how Christ, in his death, should thus literally fulfil the prophetic words of Old Testament writings concerning him: 'Reproach hath broken my heart.' I shrink from treading farther on this sacred ground, and remain, etc."

J. Begbie.

*Edinburgh*, 26th April, 1862.

As all papers from Sir James Y. Simpson have now a double interest, the following letter from himself to Dr. Hanna will be appreciated; it is replete with wisdom and full of instruction:

"Ever since reading, some ten or twelve years ago, Dr. Stroud's remarkable treatise 'On the Physical Cause of the Death of Christ,' I have been strongly impressed with the belief that the views which he adopted (Dr. Stroud himself points out that Russell, Edwards, Rambach, and other writers, had more or less correctly anticipated him in the belief that Christ had died from rupture or breaking of the heart) and maintained on this subject are fundamentally correct. Nor has this opinion been in any way altered by a perusal of some later observations published on the same question, both here and on the continent. That the immediate cause of the death of our blessed Saviour was (speaking medically) laceration or rupture of the heart, is a doctrine in regard to which there can be no absolute certainty; but, assuredly, in favor of it there is a very high amount of circumstantial probability. Let me try to state the arguments for this view in the form of a few brief propositions.

I. His death was not the mere result of crucifixion, for, first, the period was too short; a person in the prime of life, as Christ was, not dying from this mode of mortal punishment in six hours, as he did, but usually surviving till the second or third day, or even longer. Secondly, the attendant phenomena at the time of actual death were different from those of crucifixion. The crucified died, as is well known, under a lingering process of gradual exhaustion, weakness, and faintness. On the contrary, Christ cried with a loud voice, and spoke once and again; all apparently within a few minutes of his dissolution.

II. No known injury, lesion, or disease of the brain, lungs, or other vital organs could, I believe, account for such a sudden termination of His sufferings in death, except, first, arrestment of the action of the heart by fatal fainting or syncope; or, second, rupture of the walls of the heart or larger blood-vessels issuing from it.

III. The attendant symptoms—particularly the loud cry and

subsequent exclamations—show that death was not the effect of mortal fainting, or mere fatal arrestment of the action of the heart by syncope.

IV. On the other hand, these symptoms were such as have been seen in cases of rupture of the walls of the heart. Thus in the latest book published in the English language on Diseases of the Heart, the eminent author, Dr. Walshe, Professor of Medicine in University College, London, when treating of the symptoms indicating death by rupture of the heart, observes "the hand is suddenly carried to the front of the chest, a piercing shriek uttered," etc. The rapidity of the resulting death is regulated by the size and shape of the ruptured opening. But usually death very speedily ensues in consequence of the blood escaping from the interior of the heart into the cavity of the large surrounding heart sac or pericardium; which sac has in cases of rupture of the heart been found on dissection to contain sometimes two, three, four, or more pounds of blood accumulated within it, and separated into red clot and limpid serum, or "blood and water," as is seen in blood when collected out of the body in a cup or basin, in the operation of common bloodletting.

V. No medical jurist would in a court of law venture to assert, from the mere symptoms preceding death, that a person had certainly died of rupture of the heart. To obtain positive *proof* that rupture of the heart was the cause of death, a *post mortem* examination of the chest would be necessary. In ancient times such dissections were not practiced. But the details left regarding Christ's death are most strikingly peculiar in this respect, that they offer us the result of a very rude dissection, as it were by the gash* made in his side after death by the thrust of the Roman soldier's spear. The effect of that wounding or piercing of the side was an escape of "blood and water," visible to the Apostle John standing some distance off, and I do not believe that anything could possibly account for this appeareance, as

* Its size may be inferred from the Apostle Thomas being asked to thrust not his "finger," but his "hand" into it. John, xx.

described by that Apostle, except a collection of blood effused into the distended sac of the pericardium in consequence of rupture of the heart, and afterwards separated, as is usual with *extravasated* blood, into those two parts, viz: first, crassamentum or red clot, and second, watery serum. The subsequent puncture from below of the distended pericardial sac would most certainly under such circumstances, lead to the immediate ejection and escape of its sanguineous contents in the form of red clots of blood and a stream of watery serum, exactly corresponding to that description given in the sacred narrative, and "forthwith came there out blood *and* water," an appearance which no other natural event or mode of death can explain or account for.

VI. Mental emotions and passion are well known by all to affect the actions of the heart in the way of palpitation, fainting, etc. That these emotions and passions, when in overwhelming excess, occasionally, though rarely, produce laceration or rupture of the walls of the heart is stated by most medical authorities who have written on the affections of this organ; and our poets even allude to this effect as an established fact:

> "The grief that does not speak,
> Whispers the o'er-fraught heart, and bids it break."

But if ever a human heart was riven and ruptured by the mere amount of mental agony that was endured, it would surely —we might even argue a priori—be that of our Redeemer, when, during these dark and dreadful hours on the cross, He, "being made a curse for us," "bore our griefs and carried our sorrows," and suffered for sin, the malediction of God and man, "full of anguish," and "now exceeding sorrowful even unto death."

There are theological as well as medical arguments in favor of the opinion that Christ in reality died from a ruptured or broken heart. You know them infinitely better than I do. But let me merely observe that

VII. If the various wondrous prophecies and minute predictions in Psalms xxii. and lxix., regarding the circumstances connected with Christ's death be justly held as literally true, such

as "they pierced my hands and my feet"; "they part my garments among them, and cast lots upon my vesture," etc., why should we regard as merely metaphorical, and not as literally true also the declarations in the same Psalms, "Reproach hath broken my heart"; "My heart is like wax, it is melted in the midst of my bowels?" And

VIII. Death by mere crucifixion was not a form of death in which there was much, if indeed any, shedding of blood. Punctured wounds do not generally bleed; and the nails, besides being driven through parts that were not provided with large blood-vessels, necessarily remained plugging up the openings made by their passage.

The whole language and types of Scripture, however, involve the idea that the atonement for our sins was obtained by the *blood* of Christ *shed* for us during his death on the cross. "Without shedding of blood there is no remission." This shedding, however, was assuredly done in the fullest possible sense, under the view that the immediate cause of his dissolution was rupture of the heart, and the consequent fatal escape of His heart—and life—blood from the central cistern of the circulation.

It has always appeared—to my medical mind at least—that this view of the mode by which death was produced in the human body of Christ, intensifies all our thoughts and ideas regarding the immensity of the astounding sacrifice which He made for our sinful race upon the cross.

Nothing can possibly be more striking and startling than the appalling and terrible passiveness with which God as man submitted, for our sakes, His incarnate body to all the horrors and tortures of the crucifixion.

But our wonderment at the stupendous sacrifice only increases when we reflect that, while thus enduring for our sins the most cruel and agonizing form of corporeal death, He was ultimately "slain" not by the effects of the anguish of his corporeal frame, but by the effects of the mightier anguish of His mind; the fleshy walls of his heart—like the veil, as it were, in the temple

of His human body—becoming rent and riven, as for us "He poured out his soul unto death"; "the travail of His soul" in that awful hour thus standing out as unspeakably bitterer and more dreadful than even the travail of his body."

[Signed] J. Y. Simpson, M. D.

*Edinburgh*, May 1, 1862.

This remarkable work of Stroud has been recently reprinted by the Messrs. Appleton in the best manner. It will form a valuable addition to any library.

A Tabular History and Analysis of all the Undoubted Cases of Typhoid and Typhus Fever Treated at the Boston City Hospital from the date of its Opening, June 1, 1864, to June 1, 1869. By J. Baxter Upham, A. M., M. D., late Visiting Physician to the Hospital. Boston, 1870.

This brochure of 93 pages, 8vo., presents in a condensed and tabular form, the history of all the *undoubted* cases of typhoid and typhus fever which were treated in the Boston City Hospital for a period of five years. The tables are so arranged as to exhibit in order the following particulars:

1st. The number of the case in the chronological order of admission to the hospital.

2d. The name, sex, nationality, and occupation of the patient, and a reference to the volume and page in the hospital record, where it may be found.

3d. The patient's age.

4th. The date of admission to the hospital.

5th. The period of the disease at which the patient was admitted.

6th. The duration of the disease up to the time of convalescence or death.

7th. The result.

8th. The early and late symptoms.

9th. The treatment.

There are, of course, separate tables for typhoid and typhus fever, exhibiting the history and analysis of one hundred and

fifty-two (152) cases of the former, and thirty-eight (38) cases of the latter disease.

The utmost care has evidently been taken to insure the accuracy of the details as far as they go, and it is needless to say that such a publication will prove of inestimable value to some future historian of these diseases, who will collate the facts and phenomena here recorded with those which have been collected or may hereafter be collected with equal care and conscientiousness.

Out of 148 cases of typhoid fever in which the age is stated, considerably more than half—namely, 83 cases, occurred between the ages of 20 and 30, and the average was 22 26-100 years, being a little higher for the males, and a fraction lower for the females. In typhus fever, likewise, the greatest number of cases occurred between the ages of 20 and 30 years, but the average was higher, being 25 66-100 years, as the proportion of cases occurring at a later period of life was larger.

Half the cases of typhoid fever were admitted in the autumn, the other half being distributed over the spring, summer, and winter months. Of typhus fever 15 were admitted in the summer, 10 in the spring, 10 in winter, and only 3 in the autumn.

The average duration of the cases of typhoid fever, "counting from the time of the first occurrence of lassitude, headache, malaise, inaptitude for mental and bodily exertion, or other manifestations of departure from the normal state of health, so far as it could be ascertained from the testimony of the patient or his friends," and extending to the period when the temperature and pulse had sunk to nearly their normal standard, the tongue had cleared, the skin became soft and natural, and the appetite craved a return to solid and nourishing food with a gradual amendment of strength and spirits, was for the males 32 25-100 days, and for the females 36 91-100 days.

The average duration of the cases of typhus fever which recovered was for the males 18 30-100 days, for the females 19 53-100 days.

It appears that chills, headache, anorexia, pain in the

back and limbs, epistaxis, a sense of lassitude, exhaustion, abdominal pains and diarrhœa, were among the most constant of the *early* symptoms, being noted respectively in 94, 112, 68, 61, 45, 40, 38, 36, and 58 cases; while in the *later* stages the symptoms and phenomena more frequently observed were rose spots, abdominal tenderness, tympanitis, gurgling in iliac fossæ, constipation, diarrhœa, hot skin, delirium, insomnia, cough, brown and dry tongue, etc., these symptoms being noted in 109, 97, 64, 50, 66, 58, 63, 58, 60, 58, and 54 cases respectively.

Dr. Upham, adverting to the comparative frequency of constipation, as noted both among the earlier and later symptoms in these tables, is "inclined to the belief that in very many cases, absence from diarrhœa, or what would in most diseases be termed a normal quietude of the bowels, has here been put to the account of constipation. Such a misapplication of terms might, naturally enough, get upon the record in a fever where the expectation of the opposite symptom is so constantly present in the mind of the physician." He is unable otherwise to explain the frequent mention of a symptom so much opposed to previous observation and experience. We may state in this connection that in our own observation and experience it is not uncommon to have the bowels confined for eight, ten, or more days under the influence of remedies used to this end, when previously a marked tendency to diarrhœa had been exhibited. We have seldom interfered, even with the mildest enema, under such circumstances in a shorter period than a week, and have frequently allowed a much longer duration of this condition.

The most common of the early symptoms of typhus fever were chills, headache, pain in the back and limbs, soreness of the muscles, lassitude, anorexia, vomiting, increased heat of surface and constipation, these being noted in 14, 23, 17, 8, 12, 16, 10, 11, and 12 cases respectively. In the advanced stages the symptoms more frequently noted were hot skin, suffused eyes, dusky hue, foul odor of the body, dark measles-like eruption, brown and dry tongue, sordes, delirium, stupor, exhaus-

tion, and constipation, being recorded in 23, 12, 15, 9, 23, 21, 10, 19, 11, and 19 cases respectively.

Of the 152 cases of typhoid fever recorded in these tables, 131 recovered, and 21 died, the mortality being in the ratio of 1 to 7 23-100 cases. Four of the patients were insensible, and in a well nigh hopeless condition when brought into the hospital. Excluding these the mortality was 1 to 8 70-100.

This is a fair average result, but we are reminded in this connection of the remarkable statements in Dr. Jackson's "Letters to a Young Physician" touching the effects of the early use of emetics on the death rate in typhoid fever. He states that "among those admitted to the hospital in the first two weeks of the disease, one hundred and fifty took emetics before or after admission; of these 13 died, being one in 11 53-100. In the same period 80 were admitted who did not take emetics; of these 10 died, being one in 8. The difference is very striking. But of the 150 who took emetics, some took them earlier and some later in the disease. It has been thought that the earlier this and other active and depletory remedies are administered, the greater the benefit. See how far this is confirmed by the same report. Fifty-nine entered the first week of the disease, and took emetics in that week; 4 of these died, being 1 in 14 75-100. Thirty-one entered the same week, and did *not* take emetics; of these 3 died, being 1 in 10 33-100. Ninety-one entered the second week, and took emetics either before or after admission; of these 9 died, being 1 in 10 11-100. Forty-eight entered the same week, and did *not* take emetics; of these 7 died, being 1 in 6 85-100." But in making this statement of the valuable author of the "Letters to a Young Physician," we have anticipated a point which refers rather to the question of the proper treatment of this disease than to the average mortality.

Of the 38 cases of typhus fever recorded in these tables ten (10) died, showing the very large ratio of 1 death in 3 80-100 cases. One of three fatal cases, however, was moribund when brought, and died six hours afterwards, and three were deliri-

ous and unconscious at the time of admission, from which condition they did not rally. Another was a hospital nurse, forty-six years old, excited and overworked, who contracted the disease while in attendance upon patients ill with the fever.

The treatment of typhoid fever was mainly expectant. When an aperient was supposed to be required, castor oil alone, or in emulsion with gum acacia was commonly employed, generally in a very small dose. We find it difficult to believe that such a remedy is ever necessary or safe at any period later than the earlier days of the disease. Restlessness and insomnia were treated with ten grains of Dover's powders, or an eighth of a grain of sulphate of morphia. We have found larger doses necessary. In some cases opiates are not borne at all, and when that is the case, we have usually found that alcoholic stimulants have quieted the patient. In the Boston City Hospital stimulants do not appear to have been employed until called for by "debility consequent upon the latter stages of the disease, or at whatever period of the fever *depression and exhaustion of the vital power was manifest.*" We are fully convinced that beef tea and alcoholic stimulants should be given in the early stages of this disease, if we desire to realize their best effects. Let them, indeed, be used with proper care and discrimination as to quantity and frequency of repetition, but when so used they cannot, in our judgment, be used too early. They may be resorted to much too late to do any good, if we wait for the "latter stages of the disease, or for signs of "depression and exhaustion of vital power."

Other remedies used in the hospital were, bromide of potassium to allay nervous irritability and induce sleep, tepid or cool sponging, a fever mixture consisting of liq. ammoniæ acetatis ℥ ij., mist. camphoræ, aquæ distill, aa ℥ ss., if the fever was excessive, camphor water, Hoffman's anodyne, oil of turpentine, according to Dr. G. B. Wood's plan, etc. Cold water, milk and water, flax-seed tea (weak) were freely allowed as drinks. None but mild and unirritating articles of diet were allowed until convalescence was fully established. During convalescence qui-

nine and the various combinations of iron and bark were used with gratifying success.

"In 65 cases of recovery the average highest pulse rate was 108; in 14 fatal cases the average highest pulse rate was 140. In 41 cases of recovery the average highest temperature was 104° 1′; in 6 fatal cases the average highest temperature was 105° 7′."

The treatment of typhus fever did not differ very materially from that of the typhoid cases. "In desperate cases, when the powers seemed to be sinking, stimulating injections, hot pediluvia, frictions to the spine, and sinapisms to the inside of the thighs and legs were ordered. During convalescence, ale and porter were recommended."

NOTE.—This is the second review of this work; they have each been prepared by able members of the Profession, and will be read with interest and profit.—ED.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By FRANK HASTINGS HAMILTON, A. M., M. D., L. L. D. Prof. of Practical Surgery Bellevue Hospital Medical College, etc., New York. Fourth Edition. Philadelphia: H. C. Lea. 1871.

As this standard work has been twice noticed in this Journal, it is not necessary to do more than call attention to the issue of the fourth edition of it. This edition is really revised and improved. One sees this fact in the text as well as on the title page. The work is illustrated by more than three hundred most excellent wood cuts; nearly one for every other page in the volume. It would be superfluous to notice this work further. Every one who knows anything of surgery, or cares anything for it, has long been familiar with the volume. It is a monument of professional care, fidelity, rare judgment, sound sense, and surgical efficiency. A work of which any one might well be proud of being the author. It is published with great care, and reflects much credit upon the well-known publishing house whose name is embodied in the title-page.

RETROSPECT OF UTERINE PATHOLOGY AND THERAPEUTICS in the United States, specially in regard to Intra-Uterine Medication in Chronic Internal Metritis. By HENRY MILLER, M. D., (Louisville, Ky.) Emeritus Professor of Obstetrics and Diseases of Women and Children in the Louisville Medical College, and President of the Faculty, etc. New York: William Baldwin & Co. 1871.

This pamphlet contains, in full, an article which appeared, (very appropriately), originally in the "American Journal of Obstetrics." The article is an excellent manifest of what has been done in the special field described by the author, and contains a very proper and timely claim of originality for himself in having first introduced and recommeded in America the treatment of chronic internal metritis by intra-uterine medication. The time has been when Boston alone claimed to be "the hub" of the professional as well as the literary and secular wheel, but now there are multiple medical centres, each claiming a similar honor. New York, Philadelphia, and Chicago, etc., physicians are not infrequently claiming originality of suggestion, teaching or treatment, when a more creditable familiarity with medical literature would protect them from the necessary exposure of their unjust pretensions. Ephraim McDowell, Dudley, and Miller, of Kentucky; Nott, of Mobile; Eve, of Tennessee; Stone, of Louisiana; Marion Sims, of South Carolina; with many others well known and prominent, have contributed some of the most valuable currency to the professional treasury. It is proper to examine at times our professional coin, and learn "whose image and superscription" it bears, in order that those who pay tribute may always "render unto Cæsar the things which be Cæsar's," and that merit may always receive its just reward. As this excellent paper of Dr. Miller will appear in whole, or in part, in this Journal, it is unnecessary to further call attention to it here.

NEW REMEDIES—A Quarterly Retrospect of Therapeutics, Pharmacy and Allied Subjects. Edited by Horatio C. Wood, Jr., M. D., Professor of Medical Botany, University of Pennsylvania. New York: William Wood & Co.

This is a new Journal. It is one of the best. It is ably edited

and unexceptionably published. It is replete with matter instructive, curious, entertaining, and valuable. It is already a success, and it well deserves this. The October number is the second issue, and it is excellent.

TRANSACTIONS OF THE INDIANA STATE MEDICAL SOCIETY—TWENTY-FIRST ANNUAL SESSION.

This Society met in June, 1871, at Indianapolis—Dr. R. N. Todd President. The attendance was very large; four times as many delegates being present as were to be seen at the meeting of the Kentucky State Medical Society. The volume of Transactions is highly creditable; not only for its attractive and excellent appearance, but for its contents. The Committee of Publication have discharged their duty excellently well. Some of the papers are really valuable. A good lithograph likeness of the lamented Dr. J. L. Bobbs adorns the volume. The physicians of Indiana have reason to be fully satisfied with this issue; it is worthy of praise.

TRANSACTIONS OF THE STATE MEDICAL SOCIETY OF MINNESOTA.

This Society held its last meeting at St. Paul; the attendance was creditable. The spirit of the meeting was good, and the business transacted judicious and useful. The papers published are few; they are fair, and evince creditable research. The Society seems vigorous and efficient. It is doing far better than the State Medical Society of Kentucky. This last Body seems to have lapsed into a condition of dangerous lethargy; a condition, apparently, preceding the coma ushering in dissolution. It is hoped and expected that its present excellent officers will go to work and transfuse new life into it. The young and vigorous Society of Minnesota furnishes a bright example.

LARGE FIBROUS POLYPUS IN THE LARYNX REMOVED BY TRACHEOTOMY, Preceded by Laryngo-Tracheotomy. By A. RUPPANER, M. D., New York, 1871.

The title-page of this pamphlet tells the whole story. The patient is doing well. The same operation for the removal of a similar growth had been previously performed (in 1870) by Von

Brüns of Tübingen. The history of this patient is very interesting. It is a complete triumph for the laryngoscope in the successful diagnostication of obscure cases. The patient has been skillfully treated by both operators, and his life has been twice saved by the operations performed. It remains to be seen whether the tumor removed last is not essentially recurrent in character, and if so, how often a patient otherwise healthy can successfully endure so grave an operation.

ANNOUNCEMENT OF THE EVANSVILLE (IND.) MEDICAL COLLEGE—SESSION OF 1871–72.

"The cry is still they come." Another Medical College is added to the endless list.

After a Rip-Van Winkle sleep of eighteen years, this College reöpens its doors. It comes not, as did Van Winkle of classic memory, with garniture mildewed and worthless, weapons rusty and broken, and a bearing expressive of the impotence of senility, but with an air of freshness, an expression of strength, and a promise of well-doing refreshing and creditable. It comes upon the stage, indeed, with a vigor and decision suggestive of Forest in his better days; before senility had emasculated him, and before his dramatic envy of others had robbed him of the little remaining claims to respect.

The Evansville school has a session of four months. Its fees are $50. It follows the example of other schools in the Ohio and Mississippi Valleys; schools which do not compete with the old schools of the East on the fair basis of didactic, illustrative and clinical excellencies, but which secure a class by offering a money bonus; which obtain a class by buying one.

Rip-Van Winkle awoke possessed of his old nature and habits. This Van Winkle in medical school circles has parted with its old nature during its sleep. It has returned to life fully decked in the cheap finery and fashions meretriciously worn by many of its sisters in the localities immediately adjacent.

One feels almost disposed to propound to the Faculties of those cheap-fee schools the conundrum asked of the petty Israelite peddler of cheap wares. "Why do you Israelites prefer mut-

ton to venison?" The answer is suggestive and applicable: "Because we prefer what is cheap (sheep) to what is dear (deer)." It remains to be seen what is to be the result. In the meanwhile all will hope for good works and good examples in the Evansville Medical College. It has begun with a relative improvement in fees. While the cheap-fee medical schools of this section are charging $50 for five months tuition, or $10 per month, the Evansville school charges $50 for four months, or $12.50 per month. This improvement is, it is admitted, of Lilliputian proportions, but as the oak springs from the acorn, who will deny that the Evansville school may yet become one of a first-class character. The tiny germ may yet bring forth rich fruit; "*ab ovo ad mala.*"

## CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

*Portable Mixtures.*—A new method of administering medicines has been proposed in Sweeden, and has come into extensive use in France in consequence of the advantages which it possesses. It is the employment of gelatine as a vehicle, of which Professor Almen, of Upsala, is the initiator. Six grammes of gelatine are dissolved in warm water, and the desired medicine is added to the solution, which is then turned out on a glass plate to solidify, evaporate and dry. This mass, which is about as thick as paper, is then divided into squares of such size as to contain the proper dose of the medicine. A slight addition of glycerine makes this preparation tough and flexible as paper. Insoluble agents are added to the gelatine solution by a thick emulsion of gum or tragacanth.

Morphia, emetics, acetate of lead, sulphate of copper, extracts of opium, and belladonna, and powders of digitalis, and camphor are thus easily kept ready in a portable form, and administered when necessary.—*Medical Press and Circular*, Sept. 13, 1871.

*Water Unfrozen at a Temperature of* —18°C.—Boussingault finds that by preventing the dilatation of water, it may be kept unfrozen down to —18°C. He experimented with a gun barrel of steel, into which a steel ball was droped before filling it with water. During the cold days of December 26, 27, and 30 last, the temperature fell to —12° and 18°, and yet on shaking the tube the ball was found to move freely, showing that the water was not frozen.—*Amer. Jour. Sci. and Arts, Oct.*, 1871, from *L'Institut, July* 12.

*Sassafras Oil.*—The manufacture of sassafras oil has been conducted for the past two years in Richmond, Va., on an extensive scale. The oil manufactured amounts to two per cent. of the stock used, 800 pounds of unrectified oil being made from 40,000 pounds of the root. This quantity is further reduced by rectification and cleansing from sediment and impurity. A gallon of the fine oil weighs 10 pounds, and about 40 gallons are produced every week. The root is first cut up fine by a chopping machine, and the raw materials are placed in a large tub, which is closed, and steam is then forced through the mass. The oil is then distilled by the ordinary process. It is largely used for scenting toilet soap, and for flavoring tobacco.—*Med. and Surg. Rep., Aug.*, 26, 1871.

*Preservation of Pepsin.*—Dr. Lionel Beale writes to "Nature" to the effect that means hitherto adopted for preparing pepsin for medical purposes are clumsy and inefficient. Dr. Beale, however, claims one exception, a process described by himself in 1858. It simply consists in quickly drying the mucus expressed from the pig's stomach glands upon glass plates. The dried mucus is then powdered, and kept in stoppered bottles. It retains its properties for years. Eight-tenths of a grain will dissolve *one hundred grains* of coagulated white of egg. From this powder is easily prepared, by solution in distilled water, a perfectly clear and colorless digestive fluid of great activity, which *can be readily filtered.—Kans. City Med. Jour. Aug.* 1871, from *Med. Press and Circular.*

The Louisville College of Pharmacy, at the annual meeting,

held August 8th, elected the following officers: President, C. Lewis Diehl; Vice-Presidents, B. F. Scribner, John Colgan; Recording Secretary, Fred. C. Miller; Corresponding Secretary, Emil Scheffer; Treasurer, S. Fisher Dawes; Curator, J. A. McAfee. The Board of Trustees afterwards appointed committees on charter, on progress of pharmacy, on drug market, on pharmacopœia, on unofficinal formulas, on pharmaceutic legislation, on finance, on business, and on room.

This College has been successfully inaugurated as a didactic Institution. It is now in successful operation, with a class of 21 students. It has an able Faculty. Physicians, as well as druggists and pharmaceutists, will welcome the success of this school. Hereafter the great West can enjoy the advantages and safety of a skilled corps of druggists' clerks and pharmaceutists. In this College those seeking such an avocation may be thoroughly educated. It is unqualifiedly commended. Diehl, Jenkins, Schmidt, Scheffer, Kastenbine; these are names well known in Louisville; they represent experts, skilled, conscientious and efficient.

*Syrupus Assafœtidæ Compositus.*—Allow me to call your attention to a formula for a syrup I have for a number of years been in the habit of preparing, to obviate the great objection felt by most patients to the disagreeable smell and taste of assafœtida, and which has prevented to a great extent the more general use of this valuable drug. The formula I find to answer the purpose effectually, at the same time its medicinal qualities are enhanced by composition with syrup of wild cherry, possessing valuable therapeutic properties of both.

℞.—Infusi Pruni Virginianæ, Oj;
Assafœtidæ, ℥ j;
Sacch. Alb., ℥ xxiv;
Magnes. Carb, ℥ ij.

Rub the assafœtida and magnesia, with the infusion gradually added, so as to make a uniform mixture, and filter; to this, transferred to a bottle, add the sugar and agitate occasionally until it is dissolved. As a result we have a handsome syrup

which does not differ in appearance from the syrup of wild cherry.

The property possessed by the volatile oils of bitter almonds, cherry laurel leaves, bark of wild cherry, etc., containing hydrocyanic acid, of removing the odor of assafœtida has long been known, and advantage taken of this property by M. Maheir, a French pharmaceutist, to remove the odor from mortars and bottles with which it came in contact; but I am unaware that the fact has ever been applied to its administration as a medical agent.—J. J. Rambe, in the *Journal of Pharmacy*.

*Elixir Chloroform.*—

℞.—Chloroform.
Tinct. Opii.
Tinct. Camphoræ.
Spir. Ammon. Aro., aa. ℥. iss.
Oil Cinnamon, gtt. xx.
Brandy, oz. ij.—M.

Sig.—Half a fluid drachm, more or less.—*American Eclectic Medical Journal.*

*An Absurd Idea.*—Colonel Pleasanton, of Philadelphia, it is stated, claims to accomplish wonders in vegetable and animal growths by the use of violet or blue glass. He remarks very truly that the violet rays are the chemical rays; but he overlooks the important fact that by using violet-colored glass, he diminishes the very rays that he proposes to increase. No means are known to science by which we can increase the intensity of light in any portion of the spectrum. We cannot change red light into violet or violet into red; the only change we can make is to cut off a portion of the rays, but in so doing we diminish the intensity of all the remaining ones, to a greater or less amount. The only effect of the violet glass would be to cut off the yellow, orange, red, and green rays, without adding anything to the violet; in fact, the violet would rather be diminished.—*Boston Journal Chemistry.*

*Carbolic Acid in Phthisis.*—Dr. A. F. Richardson writes to the

"Medical Times and Gazette": "As the cure of tubercles frequently takes place naturally, it occurred to me that nature might be aided by means of this curative agent, administered internally. Accordingly, in the month of March last, in a case of phthisis, where the physical and functional derangements were of the most advanced kind, I prescribed two grains in syrup three times per diem—the result being diminished expectoration, and the pulse reduced from 135 to 116, with corresponding abatement of hectic fever. The medicine has been continued without any counteracting or injurious symptoms. From my experience of this case, I would feel justified in using the medicine in cases from the first to the latest stages of the disease; and I think it proper to bring it under the notice of the Profession, in order to elicit observations on it, and to have the merits of carbolic acid, as an internal medicine in cases of consumption, brought to the test."—*Ex.*

*Colored Candies.*—Some months since a great variety of the candies sold in New York were analyzed by Dr. Endemann, Assistant Chemist to the Health Department of that city, and reported in the "American Chemist." Reds were either carmine or analine-red (both harmless). Blues were either ultramarine or Prussian blue (also harmless). Yellows were either saffron, chromate of lime, chromate of baryta, chromate of lead, gamboge, or vegetable colors. Of ten samples five were colored with chromate of lead, and one with gamboge; both poisonous. Greens were harmless, so far as examined. *Starch sugar* is a common constituent of some kinds of candy, and starch is often substituted for gum arabic. In two cases *gypsum* was found, three and six per cent.; no other inorganic adulterations were detected.—*Ex.*

*Beef Tea.*—Many persons believe that beef tea is very nourishing, and that it is an excellent strengthener for people of weak health. This is a mistake. Some few practitioners and chemists have long been aware of the fact, and now their view is confirmed by Dr. Marcet. There is no nourishment in beef tea.

Mixed with solid food, it imparts a relish which promotes digestion; and the best solid that can be mixed therewith is the beef from which it was made, reduced to a powder. In two, at least, of the London hospitals the mixing of powdered beef with the beef tea has long been practised, and there the patients get strong on a beef-tea diet.—*Chamber's Journal.*

*A Simple and Excellent Cleansing Agent.*—Ammonia, or as it is more generally called, spirits of hartshorn, is a powerful alkali, and dissolves grease and dirt with great ease. It has lately been recommended very highly for many domestic purposes. For washing paint, put a teaspoonful in a quart of moderately hot water, dip in a flannel cloth, and with this simply wipe off the woodwork; no scrubbing will be necessary. For taking grease spots from any fabric, use the ammonia nearly pure, then lay white blotting paper over the spot, and iron it lightly. In washing laces, put about twelve drops in a pint of warm suds. To clean silver, mix two teaspoonfuls of ammonia in a quart of hot soap suds. Put in your silverware and wash it, using an old nail-brush or tooth-brush for the purpose. For cleaning hair-brushes, etc., simply shake the brushes up and down in a mixture of one teaspoonful of ammonia to one pint of hot water; when they are cleansed, rinse them in cold water, and stand them in the wind or in a hot place to dry. For washing finger marks from looking glasses or windows, put a few drops of ammonia on a moist rag, and make work of it. If you wish your house plants to flourish, put a few drops of the spirits in every pint of water used in watering. A teaspoonful in a basin of cold water will add much to the refreshing effect of a bath. Nothing is better than ammonia water for cleansing the hair. In every case rinse off the ammonia with clear water. To which we would only add, that for removing grease spots, a mixture of equal parts of ammonia and alcohol is better than alcohol alone; and, for taking out the red stains produced by strong acids in blue and black clothes, there is nothing better than ammonia.—*Technologist.*

*New Application of Charcoal.*—A new application of charcoal has recently been made in England for the manufacture of a permanent enamel, or varnish for coating the insides of casks. The charcoal, which is made from the wood of Salix Alba, is reduced to a very fine powder, and mixed with proper proportions of shellac and methylated spirit. When ready for use it is laid on with a brush, and the inside of the cask is fired, so as to remove the spirit and leave only the lining of charcoal and shellac; it is then coated again and fired a second time, after which it is allowed to stand a short time before being used. This composition is said to form a perfect enamel, and while it prevents any chance of leakage it preserves the casks in an extraordinary manner. It answers admirably for beer and acida, and is largely adopted by some of our principal brewers.

*Ammonia as a Motive Power.*—We have never neglected an opportunity of calling attention to ammonia as a motive power, and our attention is again called to the subject by the receipt of a pamphlet containing a report on the practicability of the gas as a motive power for street cars, published by the Ammonia Propelling Company, of New Orleans. The pamphlet contains very full information in reference to the chemical properties of ammonia, the pressure required for its liquefaction, the expansive force exerted by it, the cost of its preparation, and the result of experiments actually undertaken to test these questions.

We suppose that all of these arguments were necessary to induce capitalists to invest their money in the new enterprise, but to scientific men they are superfluous, as the theoretical force capable of being exerted by ammonia has long been well understood. There may be practical difficulties in the way of applying ammonia as a motive power, but, viewed in the light of science, it would appear to have many points to recommend it. The gas can be liquefied in a large establishment, situated a long way from the place where it is proposed to apply it, and from thence be transported to any distance. All of the heat is applied away from the place where the engine is used, and thus the danger from fire is obviated, and, in fact, in case of a fire,

there could be no better extinguisher than the ammonia itself. The loss of ammonia from leakage is said to be slight, and as the machinery is simple, the cost of the power need not be large. As the liquefied ammonia can be employed in the manufacture of ice, it is possible that the company which furnishes the gas compressed in cylinders may have a further demand for the article, and thus increase their profits. There would appear to be no good reason why ammonia ice machines and ammonia motive powers cannot be made to succeed.—*Jour. Applid Chemistry.*

*Cheap Preparation of Oxygen.*—In addition to the well-known method of Du Motay, we now have the proposition of Mallet to make use of the solubility of oxygen in water as a way to obtain the gas from the atmosphere. The mechanical contrivance by which this is accomplished is simply a force-pump for compressing air into cylinders containing water, allowing the nitrogen to escape and passing the gases from one vessel to another until nearly all of the nitrogen is eliminated and pure oxygen remains. By actual experiment it was found that after forcing air through eight cylinders not more than three per cent. of nitrogen remained, an amount that could be disregarded for all practical purposes. We have not seen a calculation of the cost of the gas prepared in this way, but as the chief expense is the maintenance of pumps, it cannot be very great. We should not be surprised to hear that Mallet's process had taken precedence over all others. The use of oxygen for metallurgical operations is beginning to be felt, and when we can have it almost as free as air we may expect to see it applied to many useful purposes, both in medicine and in the arts. *Journal Applied Chemistry.*

*Liquid Glues.*—A correspondent of the "Scientific American" gives the following in relation to liquid glues:

"An excellent liquid glue is made by dissolving glue in nitric ether. The ether will only dissolve a certain amount of the glue, consequently the solution cannot be made too thick. The

glue thus made is about the consistency of molasses, and is doubly as tenacious as that made with hot water. If a few bits of India-rubber, cut into scraps the size of a buckshot, be added, and the solution allowed to stand a few days, being stirred frequently, it will be all the better, and will resist dampness twice as well as glue made with water. The best liquid glue that I have any knowledge of is made as follows: Take gum of shellac three parts; caoutchouc (India-rubber) one part, by weight. Dissolve the caoutchouc and shellac, in separate vessels, in ether free from alcohol, applying a gentle heat. When thoroughly dissolved, mix the two solutions, and keep in a bottle tightly stoppered. This glue is called marine glue, and resists the action of water, both hot and cold, and most of the acids and alkalies. Pieces of wood, leather, or other substances, joined together by it, will part at any other point than at the joint thus made. If the glue be thinned by the admixture of ether, and applied as a varnish to leather, along the seams where it is sewed together, it renders the joint or seam water-tight, and almost impossible to separate.

*Action of Sulphuric Acid on Starch.*—Prof. A. Vogel has a neat way of illustrating the action of sulphuric acid on starch. Ordinary writing paper is now so largely sized with starch that it is admirably adapted for the experiment. Drawings or writings are made upon the paper with very dilute acid, and the sheet cautiously heated; if now a solution of iodine be painted upon the paper, the whole will turn blue except the places which have been traced with the acid, and as, in course of time, the blue color will disappear altogether, the same sheet of paper can serve for a number of experiments.—*Ex.*

*South Carolina Phosphates.*—Mr. John Commins, of Charleston, S. C., has invented a method for the treatment of the nodular phosphate of lime of that region without the use of sulphuric acid, which is well worthy of attention. It consists in heating the mineral to redness in a furnace or kiln and allowing the sea water to drip from the top on the heated mass. By this operation the stone is thoroughly disintegrated, and it is claimed

by the inventor that the phosphate of lime becomes soluble and capable of being assimilated by plants. Any method by which we are enabled to dispense with sulphuric acid must be received with favor, and we should be glad to know that the ingenious invention of Mr. Commins was entirely successful.—*Journal Applied Chemistry.*

*Cure for Bite of a Rattlesnake.*—Dr. Weir Mitchell states that the application of carbolic acid immediately on the receipt of the injury prevents both local and general poisoning. The pure acid, however, if applied in too great quantity, is liable to produce sloughing and even dangerous symptoms, hence it is best used in the proportion of two parts of acid and one of alcohol. Given internally, or applied to the wound at a late period, it produces no effect. It is believed to act, not by neutralizing the poison, but by causing contraction of the small vessels, and thus preventing its absorption.—*Jour. Ap. Chem.*

*New Solvents for Indigo.*—Up to a few years ago indigo was considered to be insoluble in almost all agents which did not decompose it. Recent research has disclosed several agents in which it can be dissolved, and from which it crystallizes on cooling. The "Chemical News" says that "hot aniline dissolves indigo, forming a solution having almost exactly the tint of the solution of azulyne in methylated spirit. On cooling the indigo crystallizes out in beautiful coppery spangles."

Dr. Wartha now states that Venetian turpentine, heated to its incipient boiling point, is a solvent for indigo. Spermacetti, stearic acid and chloroform, all at a high temperature, are stated to be more or less good solvents for indigo.

*Phosphorus Pills.*—Dr. Ratcliffe, in the "Pharmaceutical Journal," suggests this formulæ: Take of phosphorus 6 grains; suet 600 grains; melt the suet in a stopped bottle capable of holding twice the quantity indicated; put in the phosphorus, and when liquid agitate the mixture until it becomes solid; roll into 3-grain pills, and cover with gelatine. Each pill will contain one thirty-third of a grain of phosphorus.

*Soda Mint.*—This is much prescribed in Philadelphia as an antacid and carminative, and is prepared, according to the "Journal of Pharmacy," as follows:

℞.—Sodæ Bicarb., ℥ss.;
Spt. Ammon. Aromat., ℥i.;
Aquæ Menthæ Pip., Oj.

M. Dose, from a desert-spoonful to a tablespoonful for adults; from half to one teaspoonful for infants.

*Preservation of Tinct. Kino from Gelatinizing.*—To protect this tincture from change, Mr. J. M. Wood uses this formula:

℞.—Kino in fine powder, ℥ i. ss.;
Alcohol, 835 f. ℥ viii.;
Water, f. ℥ iv.;
Glycerine, f. ℥ iv.

Mix the alcohol, water, and glycerine, and having mixed the kino with an equal bulk of clean sand, introduce into a percolator and pour on the menstruum.

*To Prevent the Moulding of Gum Arabic or Mucilage.*—It is well known that solutions of gum arabic soon become mouldy, and eventually sour, and finally lose all adhesive properties. To prevent this it has been customary to use creosote, carbolic acid, corrosive sublimate, and other poisonous disagreeable agents, the cost of which, or their unpleasant character, have deterred persons from using them. We now see it stated that sulphate of quinine will serve the same purpose without itself imparting any bad odor. The addition of a solution of a few crystals of this salt to gum arabic will prevent the formation of mould quite as effectually as carbolic acid, and by analogy it is safe to suppose that the same salt could be used in writing ink, mucilage, and possibly glue.—*Jour. Applied Chemistry.*

*How to Extract Coffee.*—If coffee, after roasting, were made as fine as flour by pounding in a mortar, it could be extracted so much better as to require not more than two-fifths as much as if it were only coarsely ground. An equally strong extract can be made by allowing water to stand on the grounds, as by

giving it a boil or by filtering through it. The latter method is the true one for retaining all of the aroma. When coffee beans are roasted, an empyreumatic oil is produced, which, being very volatile, is expelled if the coffee extract be boiled. It is better to make the grounds as fine as flour, and to extract by filteration, and never to boil.—*Jour. Applied Chemistry.*

*Glycerine to Mask Castor Oil.*—It is stated by a correspondent of the "Boston Medical and Surgical Journal," that by employing the following formula a mixture is produced in which the disagreeable taste of the oil is completely disguised:

Glycerine.
Ol. Ricini, aa. ℥ ij.;
Ol. Cinnam., m. iv.

The essential oil should be rubbed up with the glycerine; the castor oil added, and the mixture well shaken before using.

*Vegetable Carbolic Acid.*—We read that a plant called the andromeda leschenaultil, growing in the Neilgherry hills, in India, has been found to yield carbolic acid. Mr. Broughton, the Government medical officer for the district, reports that it is far superior in purity to the ordinary product of coal tar, being less deliquescent and free from any admixture of noxious concomitants. As its cost is far above that of the mineral product, and as the latter can be chemically purified the discovery has no economical or commercial value; but it is interesting as a botanical and chemical fact.—*Druggists' Circular.*

*Kennedy's Concentrated Extract of Pinus Canadensis.*—Dr. J. Marion Sims thus writes: "I have had but a limited experience with the new extract of pinus canadensis, but I am so well satisfied of its value that I am anxious to call the attention of the Profession to it. I have used it for about eight months in some affections of the rectum, vagina, and cervix uteri. I have used it considerably diluted as a vaginal wash, with great success; but I prefer to apply it to the os tincæ on cotton wool, either pure or mixed with glycerine or glycerine and rose-water. Thus applied, it should remain intact

for two or three or even four days, and then be removed. In this way I have seen chronic granular vaginitis remedied in a few days that had resisted the ordinary remedies for weeks; and I have seen granular erosions, with leucorrhœa, disappear very rapidly under its use. I have not time to do more than call the attention of my professional brethren to this new extract, which I am sure will soon be recognized as a valuable addition to our Materia Medica.—*Druggists' Circular.*

*The Tolerance of Chloroform.*—Dr. Edward R. Squibb, of Brooklyn, N. Y. ("New York Medical Journal,") remarks that the greatest consumption of chloroform he ever met with was in a patient of Dr. Gustave Morelli, of New York city. This patient was the widow of an Italian physician; her age forty-eight, and her appearance healthy. She was subject to hereditary migratory gout, the sudden pain of which was so severe that she finally gave up all slower means of temporary alleviation for the prompt action of chloroform. Between the 31st of March and the 16th of December, 1865, a record was kept, and during this time, by Dr. Morelli's direction, she was supplied by Dr. Squibb with fifty-three pounds of purified chloroform. During her acute attacks she not infrequently used two pounds a day.

*To Make Carbolic Acid Paper.*—Carbolic acid paper, which is now much used for packing fresh meats, for the purpose of preserving them against spoiling, is made by melting five parts of stearine at a gentle heat, and then stirring in thoroughly two parts of carbolic acid; after which five parts of melted paraffine are to be added. The whole is to be well stirred together until it cools; after which it is melted and applied with a brush to the paper, in quires, in the same way as in preparing the waxed paper so much used in Europe for wrapping various articles.—*Druggists' Circular.*

*To Make Tungstic Glue.*—Tungstic glue bids fair to be an acceptable substitute for hard India-rubber, now so high in price. It is prepared by mixing a thick solution of glue with

tungstate of soda, and hydrochloric acid, by means of which a compound of tungstic acid and glue is precipitated, which, at a temperature of 86 to 104° Fahrenheit, is sufficiently elastic to admit of being drawn out into very thin sheets. On cooling this mass becomes solid and brittle, and on being heated is again soft and plastic. This new compound, it is said, can be used for all the purposes to which hard rubber is adapted.—*Druggists' Circular.*

## MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

*On The Gelseminum Sempervirens.*—By E. P. Hurd, M. D., Newburyport, Mass.—The yellow jessamine is becoming favorably known among regular practitioners. First brought into notice by the Eclectics, it has been proved to possess properties which render it of great value as a medicinal agent.

Having been in the habit, for some time, of using a tincture of the root in my practice, I can from experience speak confidently in its favor. I believe that, as a cardiac sedative, we have not its equal in the whole range of the materia medica. It relieves in a marked manner the shortness of breath and palpitations of all forms of heart disease. I have seen more prompt and decided benefit from its use in chronic valvular disease, than from digitalis. The dose may be three drops of the saturated tincture every two, three or four hours. A patient with aortic regurgitant disease, has taken, for more than a week, three drops of the tincture every two hours. The relief from dyspnœa and palpitation has been wondertul. It sometimes produces a little giddiness or nausea; these are the only unpleasant symptoms from its use. There is a marked contrast between the present ease and comfort which the patient experiences, and her uneasiness and distress previous to commencing the remedy. The

gelseminum is combined with Hoffmann's anodyne and tincture of lavender. The gelseminum is believed to have a specific effect on the vaso-motor nerves, stimulating them, and thus equaliziug the circulation and lessening the labor of the heart. It also allays nervous irritability. I could wish that those of my *confreres* who have never used the jessamine would give it a trial. I believe it surer than veratrum or prussic acid, and safer than digitalis.

The Eclectics rely much on yellow jessamine as a febrifuge. They give it in all acute sthenic febrile diseases where the antiphlogistic treatment is indicated. I question, however, whether as a febrifuge it has any advantage over veratrum viride, which is now so popular as a remedy.

King, in his Materia Medica, speaks highly of the tincture of gelseminum as a relaxant in rigidity of the os, puerperal convulsions and dysmenorrhœa. The dose in such cases would be large.

The yellow jessamine is a native of the Southern States, where it is much cultivated as an ornamental vine. It has fine yellow flowers, smooth stem, and opposite, perennial entire leaves, growing on short petioles. The root is the officinal part. The active principle is probably its alkaloid, gelseminia.—*Boston Medical Journal.*

*A New Street Lamp.*—A new description of lamp for street lighting has recently been experimented on in London, the principle of which is the application of reflectors, in order to bend down and utilize the amount of light which is at present wasted by upward radiation. It is manifest that the rays of light from a street lamp which now strike the eye of a spectator placed on the ground are only a small portion of those actually emitted by the flames. The rays which pass through the upper portions of the sides of the lantern, or through its sloping roof, are entirely dissipated, or at best, if partially and imperfectly reflected by clouds or atmospheric particles, become visible only in the form of the red glow which overhangs a distant town. Mr. Skelton, the inventor, calculates that about two-

thirds of the light given by the gas flame are in this way lost; and he has arranged strips of looking-glass in such a way that the loss will be effectually prevented. The upper half of each side of the lamp, and the whole of each side of the sloping roof, are occupied by a frame, in which the strips are placed with their reflecting surface downward, in a manner somewhat analagous to the laths of a Venetian blind. The precise character of the effect produced will depend upon the distance of the strips apart, upon their width, and upon their angle of inclination; but the general result is, subject to small variations, that the street receives three times as much light as would fall upon it through lanterns of the ordinary kind. The frames holding the strips are glazed on both sides, and made dust-proof, so that the mirrors will not themselves become soiled or tarnished, and the reflector as a whole can be cleansed in the ordinary way, by simply wiping the glass. The plan is equally applicable to every form of lamp, and the patent includes the application of prismatic reflectors, which would present advantages in certain cases.—*News.*

*Mr. Editor:* Will you be kind enough to give the accompanying addresses a place in your next Journal, to give it circulation, and give it such notice as you may see fit.

Very respectfully, etc.,

CHICAGO. F. A. EMMONS.

NOTE.—See Editorial Department.

*The Trustees of Rush Medical College to its Alumni, Greeting:* The last terrible conflagration which devastated so large and fair a portion of Chicago, swept out of existence nearly all of the material part of your Alma Mater. Rush Medical College exists to-day only in its legal organization, the lot on which the College building stood, the energy of its Trustees and Faculty, and the love and fidelity of the Alumni.

The College edifice, so recently and expensively erected, the chemical and physiological laboratories, the museum, and all the appliances of teaching, are gone, and a sad ruin replaces them.

The Trustees are, however, cheered and encouraged by the

expressions of sympathy and offers of pecuniary assistance which have come to them from many of the Alumni in different parts of the country, The Alumni in Chicago have appointed a committee to appeal to their brethren in behalf of their Alma Mater. This appeal the Trustees most heartily approve and endorse; and while all sums which may be offered will be most thankfully received, they are confident that fortune has smiled upon very many of the sons of "Old Rush," and that among these favored ones there are generous hearts which will prompt to munificent donations. To such they make the following offer:

For every donation of $500 the Trustees will establish a perpetual free scholarship, which shall bear the name of the donor, and which shall be conspicuously emblazoned on the wall of the lecture-room. A certificate of this scholarship, engrossed on parchment will be issued to the donor, which certificate shall secure to the bearer free tuition, and when found qualified, free graduation. The certificate shall be perpetual in its operation; and thus the donor will have endowed for one student each year a free medical college.

WILLIAM B. OGDEN, Chairman,
GRANT GOODRICH, Secretary.

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*Meeting and Organization of the Committee.*—At an appointed meeting of the Executive Committee, held at Cook County Hospital, October 26th, 1871, all the members being present, Dr. T. D. Fitch in the chair, the Committee organized by the election of the following officers: F. A. Emmons, M. D., Secretary, Ben C. Miller, M. D., Assistant Secretary, C. T. Parkes, M. D., Treasurer, who was required to give good and satisfactory bonds in the sum of thirty thousand ($30,000) dollars, for the faithful performance of his trust, which has been furnished and duly accepted.

T. D. FITCH, M. D., Chairman.
F. A. EMMONS, M. D., Secretary.

CHICAGO, November 1st, 1871.

*To Whom It May Concern:*

This is to certify, that the resident Alumni of Rush Medical College, of the city of Chicago, at a meeting held at the house of E. Ingals, M. D., ond the eve of October 17, 1871, appointed the following Alumni an Executive Committee, to draft and present an appeal to the Alumni and friends of the College, for aid to rebuild and refurnish the College Building, viz: T. D. Fitch, M. D., Chairman; H. A. Johnson, M. D., V. L. Hurlbut, M. D., C. T. Parkes, M. D., Ben C. Miller, M. D., and F. A. Emmons, M. D.

E. INGALS, M. D., Chairman.
CURTIS T. FENN, M. D., Secretary.

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*An Appeal to the Alumni and Friends of the Rush Medical College, recently destroyed by fire, for aid to assist in its rebuilding:*

This College is among the oldest institutions of learning in the Northwest, having been in operation since 1843, at which time the region now tributary to Chicago was but sparsely populated, and had little wealth. During this time it has supplied a pressing need of this new country. It has educated a large number of yung men, who are scattered through our whole country, worthily filling places of great usefulness and responsibility; and for this, both themselves and the public are indebted, in a great measure, to the school in which they received their instruction. A large proportion of its students have been possessed of little, save youth, hope, intelligence, and determination. Many of these, having been generously aided by the College, have taken rank among the most substantial members of the Profession. The Faculty at all times, since its organization, has been moved by an earnest desire to promote the best interests of the Profession and the College. For this its members have labored faithfully and earnestly; they have met the pecuniary burden of the School from its first foundation, and four years since they erected from their own resources, at an expense of $70,000, the most ample and best appointed College

building on this continent, and filled it with every necessary appliance for successful teaching, and the influence and usefulness of the School has steadily increased from year to year. But in a day, the College building, with all its contents, was swept away, along with a large part of the city, in which it stood a peer among many other noble institutions of learning. The pecuniary loss of the Faculty, in the destruction of the College, is light when weighed against others they have sustained. A number have lost nearly everything, and all have suffered much. The College must be rebuilt. Its past history, its future promise for good, demand no less. Under the circumstances, it is unreasonable to expect the Faculty to do this unaided. The College is now in a condition to justify an appeal to its Alumni, and to society, for some return for the favors it has conferred upon both. There is, perhaps, no field of benevolence, that offers a richer return than to provide adequate and easy opportunities for instruction to those who desire to become learned in the best means for assuaging pain and healing the sick.

All donations may be remitted to Chas. T. Parkes, M. D., 462 Elston avenue, Chicago, who has been elected Treasurer for the fund. They will be thankfully acknowledged, and faithfully devoted to the rebuilding of the College.

## MEDICAL NEWS.

"Nulla dies sine linea."

*Cundurango.*—It seems that in South America there are several varieties of this plant. All but one variety are said to be inert; the one forming this exception has in Ecuador some little value in the native treatment for syphilis, but none for cancer. The specimens sent to the State Department have proved to be utterly valueless. They have been tried at almost all of our large medical centres, and have been unqualifiedly and indignantly

condemned. The patients have almost invariably died, and those now living have, as a rule, abandoned the drug in despair and disgust. The specimens sent by our State Department to the British Government have been tried and condemned as worthless. The American State Department, (Mr. Fish), has been active in advertising noisily the alleged merits of this remedy, but has always refused to publish the evidence of its worthlessness and failure. It is justly subjected to grave suspicions of complicity in speculation either directly or indirectly in this article. The great American apostle of cundurango, Dr. Bliss, of Washington, D. C., has outraged medical sentiment, and has been expelled from medical societies, repudiated and outlawed. He and his friends are even now employed in fatuous eulogy of cundurango, and vainly endeavoring to impose still upon our credulity and purse. The whole matter *ab initio* has been a stupendous fraud; it is time to give it, and those dishonestly connected with it public burial; to offer, in national strains, a national requiem over the remains. The following medical hymn is offered for use to all who, on the next Fourth of July, are disposed, post-prandially of course, to indulge themselves and their friends in our national and classic air:

CUNDURANGO.

[To be sung to the air of our National Anthem]

1

Cundurango came to Bliss,
Through our State Department,
This and Bliss each one will hiss,
For their wily management.

CHORUS.

Yankee doodle, doodle-do,
Yankee doodle dandy;
There's some one we all must stew,
And Bliss is very handy.

2

Fish and Bliss, with artful lies,
Their pockets lined with gold, oh,
They stuck their fingers in our eyes,
And called it—Cundurango.

3

Patients, with frightful cancer,
Moaned, Doctors can't you cure me, oh,
Cried Doctor Bliss, I can, Sir,
With cash and Cundurango.

4

But each patient surely dies,
While Dr. Bliss has fallen low,
Name and fame stained with lies,
His grave is Cundurango.

5

Doctor Bliss now sadly cries,
My game and fame are gone, oh,
Each one from me strangely flies,
And calls me—Cundurango.

6

Cancer patients sent to Bliss,
Gaily danced a fandango;
But they've all now gone to bliss,
To the tune of—Cundurango.

CHORUS.

Yankee doodle, doodle-do,
Yankee doodle dandy,
There's some one we all must stew,
And Bliss is very handy.

*The Boston Medical Tragedy.*—Our Boston friends recently endeavored to expel their homœopathic brethren from their chief Medical Society. These gentlemen who were to be ejected had, some of them, become apostates since their admission; others were admitted, it seems, as homœopaths, in virtue of their having a Harvard diploma. Just as the *denouement* seemed about to be dramatically successful, the presence of a sheriff on the stage created the most intense sensation. He served an injunction in behalf of the knights of the little pills upon the Society, and the Hahnemannic heroes remained masters of the field. It appears that the Society is worth $50,000, and the contending members each intend to doughtily assert their claims to being (in theory at least), parties to a proprietorship in this sum. The curtain is down at present, but is soon to rise again. There are

evidences of coming carnage and sanguinary destruction. The "hub" revolves in a mire of foul distrust and a slough of muddy disputation. The firmament over the doomed city is veiled with gloomy and lurid clouds, and the whole atmosphere is portentous of devastating storms. The medical armies are both ready for the field, and Boston ears are strained to catch, in alarm, the first dire sound of the cannons' opening roar! These remarkable warriors have the promise of an active campaign before them. As they have been so quick and relentless in condemning strife in the medical field elsewhere, they present rather a curious spectacle. It is to be hoped that there will be at least one result of the battle, a disappearance of Boston homilies on the subject of medical contention. From the ever-peaceful field of Kentucky we watch the Boston strife with hands up-lifted in surprise; but as the contending armies are bent on destruction, we say, with Macbeth, "hang out the banners on the outward walls"; "lay on Macduff," etc. May Boston have soon another name; the Cemetery of Homœopathy.

*The Sayre-Ruppaner Case.*—Several months since, Dr. Sayre preferred charges against Dr. Ruppaner for many acts of omission and commission, each one of which, if sustained, would have justly brought disgrace upon the unfortunate culprit. Dr. Ruppaner has, it seems, refused to appear before the appointed medical tribunal, alleging for such a course reasons which are not only untenable, but disreputable; they very justly subject him to the grave suspicion of being irremediably and indefensibly guilty. What his punishment would have been, cannot of course be determined, had he been found guilty by the medical tribunal selected; the verdict would unquestionably, from the character of those having charge of the matter, have been just and even generous. During the present month Dr. Ruppaner has unwisely, foolishly, appealed to a court of law, and has, through a most untenable, unwarrantable, and impudent ruling of Judge Barnard, obtained an injunction, staying the proceedings of the Medical Society which had the proper jurisdiction

of this case. Any medical man who thus flees from a medical tribunal to seek the quibbling protection of a court of law, furnishes roasons not only for the gravest suspicion of his guilt, but reasons conclusive for placing him in medical coventry. The Profession should place its stigma upon such a man, and the medical Press everywhere would be inexcusably derelict if it failed to bulletin such an offense and such an offender for general and unsparing reprehension. This Journal has condemned both Drs. Sayre and Ruppaner in their past controversial relations before the public, but it is a pleasure to testify at present that Dr. Sayre's recent course is such, as to justly secure for him the respect and commendation of his brethren.

*Jute Culture.*—Dr. F. P. Porcher, of Charleston, S. C., is doing good service in inducing the Government to take active measures for the introduction of jute culture in this country. This plant could, it seems, be easily cultivated as a staple not much inferior in importance to cotton, and far more easily and safely managed. For coarse heavy fabrics, it is excellent. It is pleasing to see medical men giving the benefit of their knowledge, as botanists, to develop the material resources of their people, and to demonstrate to these, that physicians are not, as is alleged by political economists, consumers in the social fabric.

## EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

*Distributing Medical Pamphlets.*—No one who notices, with an observant and really interested eye, all which makes up the honor and dishonor of the medical profession, can fail to have appreciated the growing and disreputable practice of gratuitously distributing medical pamphlets; pamphlets which are published for the exclusive and evident reason of demonstrating the medical acumen and special skill of their authors. Physicians

are quick to condemn, as charlatanism, the distribution of circulars, hand-bills, medical cards, (with or without titulary appellations attached), and all such papers as approximate in appearance or effect the advertising devices of quacks and mountebanks; yet it is becoming each year more common for physicians to publish, and gratuitously distribute pamphlets, whose prime and manifest effect is to advertise the skill, erudition and general efficiency of their authors. In what respect does such a custom in reputable medical men differ from the same custom in medical men condemned as disreputable?

If a physician has any information of value to communicate to the Profession, he should do so either through the Medical Journals which are always ready to publish such material, or he should publish his paper through some bookseller or publisher, and have his pamphlets sold. What is not worth purchasing in a bookstore, or receiving into the columns of a Journal, may very justly, as a rule, be regarded as worthless; and the motives of such authors may justly be suspected. It would over-tax utterly the powers of the medical philosopher to establish a differential diagnosis between the morbid condition of such authors and that of the empirics and charlatans so justly repudiated. These pamphlets furnish evidences of questionable motives on the part of their authors; they are certainly queer productions. The cases are all obscure; the diagnosis difficult, but alway correct; the symptoms wonderful, the treatment novel, yet always successful, the details being of course concealed; the recoveries causing universal surprise; the attention of hundreds has been directed to the skillful disciple of Æsculapius; many more similar and wonderful cases are sent to him; their history and condition equally wonderful, and their recoveries equally marvellous. The treatment is sufficiently given to screen the author from being pilloried as a charlatan, and sufficiently concealed to secure to him what he seeks; notoriety, mystery, a reputation for wonderful acumen, tact, judgment, skill, and success; to secure for him the result which underlies all that renders the object of empiricism so despicable, notoriety and its chief offsprings, patronage and money.

It is time to direct attention to this evil. If physicians have any valuable information to contribute, all who respect themselves or their profession should present this through reputable Medical Journals, or have it published and sold by some reputable bookseller. It is time to condemn the growing evil of gratuitously distributing medical pamphlets, when these pamphlets are intended to show the professional skill of their authors. Of course where pamphlets are published not for this object, not for the pecuniary advantage of their authors, but to subserve some useful purpose, to uphold what is good in the Profession and to expose all that is bad; to screen the chaff from the wheat, and to plant good seed whose fruit shall nourish and improve, all such objections are not applicable; but it is time to condemn those mercenary souls, with whom thrift supersedes character, and who regard Ego as the synonyme for the medical Profession. Such men are charlatans in spirit; charlatans in act; yet they claim to be reputable members of the medical Profession. It is time to get the brand ready; to apply it publicly and well.

## EDITORIAL BREVITIES.

The case of Lithiasis, published in the last Journal, was furnished by Dr. L. Lynes, of Mississippi; being received through Dr. J. W. Thompson, of Paducah, Ky., his name was erroneously published, representing him as the author.———What has become of the "New York Medical Gazette;" it has not made its appearance for several months?———Dr. W. E. Daily, of Kentucky, has removed to Texas. As a physician earnest, enthusiastic, and having the welfare of his profession prominently before him, he is warmly commended to the brethren in Texas. ———The Board of Governors of the City Hospital at Albany, New York, is still outraging the decency and efficiency of that Institution by repudiating the best medical talent of their city, so long as this refuses to be used for partisan purposes and to pander to the desires of their unworthy protegé, Dr. Armsby.———In noticing the catalogue of the Mobile Medical College, it was stated that the graduation fee had been

changed from $5 to $25; it is the matriculation fee that has been so changed. This is the price ($25) charged for entering that College.———Attention is directed to the action recently taken by the Abingdon (Va.) Medical Society in securing the passage of such laws by the Legislature as will secure the Profession in the collection of their claims, and give them adequate protection from the vampire horde of charlatans and mountebanks which (like the locusts of Egypt) devour the land, and which, instead of being exposed and outlawed by the secular Press, is by this venal and corrupt organization eulogized and sustained. To secure such laws; to secure proper registration laws, and to secure the erection of State Inebriate Asylums, should be, in part, the object of every active Medical Society. ———Attention is called to the circulars from Chicago, published in the Miscellaneous Department. Medical men will, it is hoped, take pleasure in aiding their brethren in that scourged and unfortunate city.———In the Chemical and Pharmacutical Department there is an excellent and novel article on the subject of "portable medicines." The manufacture of such medicines has been introduced into this country; the medicines are offered for sale under the name and title of "divided medicines." The manufacturers ask the attention of the Profession. So far as is known they are fully entitled to confidence. They expect no praise of their articles, and will not indeed receive this until they have won it; they do ask a trial, and the exceedingly convenient and portable character of their preparations is certainly worthy of fair and practical notice. The character of the House is excellent. Read their statement in the page opposite the third cover page of this Journal.———The index for volumes eleven and twelve will be issued in the Journal for January, 1872. ———As the annual municipal and State mortuary reports of our country will soon be published, it is hoped that they will be made of practical value; as they have so far been issued, they are preposterously absurd and indescribably worthless. How educated physicians can perpetrate the silly act of issuing such reports, as are usually presented, is inconceivable. One

reads in such tables the serious record of so many cases of death from "dropsy"; whether the dropsy be due to anæmia, cirrhosis, valvular cardiac disease, chronic inflammation of serous structures, or tubercle, etc., is never mentioned; the disease of which the dropsy has been a mere symptom, is stupidly omitted. "Consumption," "heart-disease," "spasms," "paralysis," "cancer," "jaundice," "abscess," "croup," "spinal disease," "scrofula," etc., etc., are gravely recorded in the mortuary reports, in magnificent elucidation of the cause of death, and as valuable guides for the pathologist and statistician. Such reports are not only worthless, they are erroneous, false, and unjust. They may be tolerated in an undertaker, or nurse, but they certainly cover their medical authors with ridicule and disgrace. It is not surprising that even the secular public derides them, and that State Legislatures refuse to authorize, by legal enactment, the preparation and dissemination of mortuary reports. Judging of such reports from those seen in the public prints, they very naturally refuse to be silly parties to such patent absurdities. Until physicians present all their mortuary reports in a scientific, and therefore reliable and useful manner, it is folly to ask or expect legislative Bodies to make proper provision for the creation of proper registration tables. It is not the fault of legislative Bodies, when they refuse to create such tables; the fault lies with the medical Profession. When they so act as to secure proper tables; when they sting, disgrace and drive from the field those who (in the tables, so familiar throughout so many cities and States,) bring contumely, ridicule and disgrace upon the Medical Profession; when they demonstrate how tables should be prepared, and what practical, political, and pecuniary lessons can be drawn from them to guide the people in legislation, as the medical lessons deduced should guide the physician in the library and at the bedside, Legislatures will never require anything more than a plain and lucid presentation of the question to promptly create a properly organized office for the collection and dissemination of such valuable information. Physicians must so act as to require proper

tables from their medical men now entrusted with such duties, before they can expect Legislatures to act at all in this connection; it is idle, it is supreme folly to expect legislators of sense to make themselves parties to such absurdities as mortuary reports and registration tables prepared as most of them are at present. Nothing can sooner call the blush of shame, mortification, and anger to the face of an educated physician than these mortuary reports and registration tables, as they are so frequently and familiarly presented. Deaths are foolishly yet gravely ascribed, in these Health Reports, to "dropsy," etc. Why not ascribe a few of them to "sub-sultus tendinum," to floccitatio," etc. This would furnish a little variety, and the act would be fully as valuable, and certainly not more foolish.

*Close of Volume Twelve.*—This number closes volume twelve of this Journal. The period of probation and experiment has passed; the Journal is a success; it has reaped this reward, at least, as a return for six years of indescribable labor and corroding care. Of the fourteen Journals established at the South since the war, nine have perished. This, with four others, remain. Whatever may be said of the present and future of these Journals, the "Richmond and Louisville Medical Journal" rests upon the sure basis of success. The past year has been the most prosperous year of its existence. Those who subscribed, in past years, not from inclination, but from "duty," have disappeared from the subscription list; the names of many who seemed to think that their subscribing to a Journal was an honor, and the payment of their subscription anything else than honor or honesty, have been carefully expunged from the Journal books; the names remaining represent those whom it is a pride to recognize as the friends and supporters of the work. These have made the Journal what it is, whatever this may be; with their purse and pen, they have carried it through the deep waters of trial and adversity, and have placed it where it now is, in prosperity and safety. But they have done far more than this; there are few of them who have not enlisted others in support of the work; while some have done even more than

this, they have not only sustained the Journal by paying for it, by writing for it, and by working for it, but several have endured a crucial test indeed, they have fought for it. Such friends make it impossible for a Journal to suffer; they protect, develop, and carry it. Gratitude is speechless in seeking to thank them in words, and the writer of this is indeed very grateful. He can only say so, and hope to show that he feels so. The Journal will, it is believed, be steadily improved, and offer to its supporters an increasing return for their outlay. The course of the Journal will be as it has been. To procure the best material; to publish promptly and liberally; to give each year more material than formed the basis of agreement (this volume should contain 672 pages, it contains 730); to advocate the best interests of the Profession; to publish the truth irrespectively of all persons; to furnish fair exhibits of current medical literature, and to give in regard to all of this just and impartial criticism.

The friends of the Journal will please remember that it is published without capital; a small reminder of this fact will be found by many in this number, and they are respectfully asked to act promptly in regard to it. A new volume is about to be commenced, and their aid is, as usual, required.

This number closes another volume, and this volume marks, in part, the close of another year. It is the season for kindly feeling, and this cannot be better manifested here, than by wishing for each reader a prosperous new year, and a peaceful, happy, closure of the old. Before another Journal is issued, each traveller on the old highway of time will have passed another milestone; on this is carved "the close of 1871." Let us rest here; remembering, with advantage, the lessons of the past years, and commencing, with renewed hope, the year that is to come. A new year is before us; THE OLD YEAR HAS CLOSED!

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